



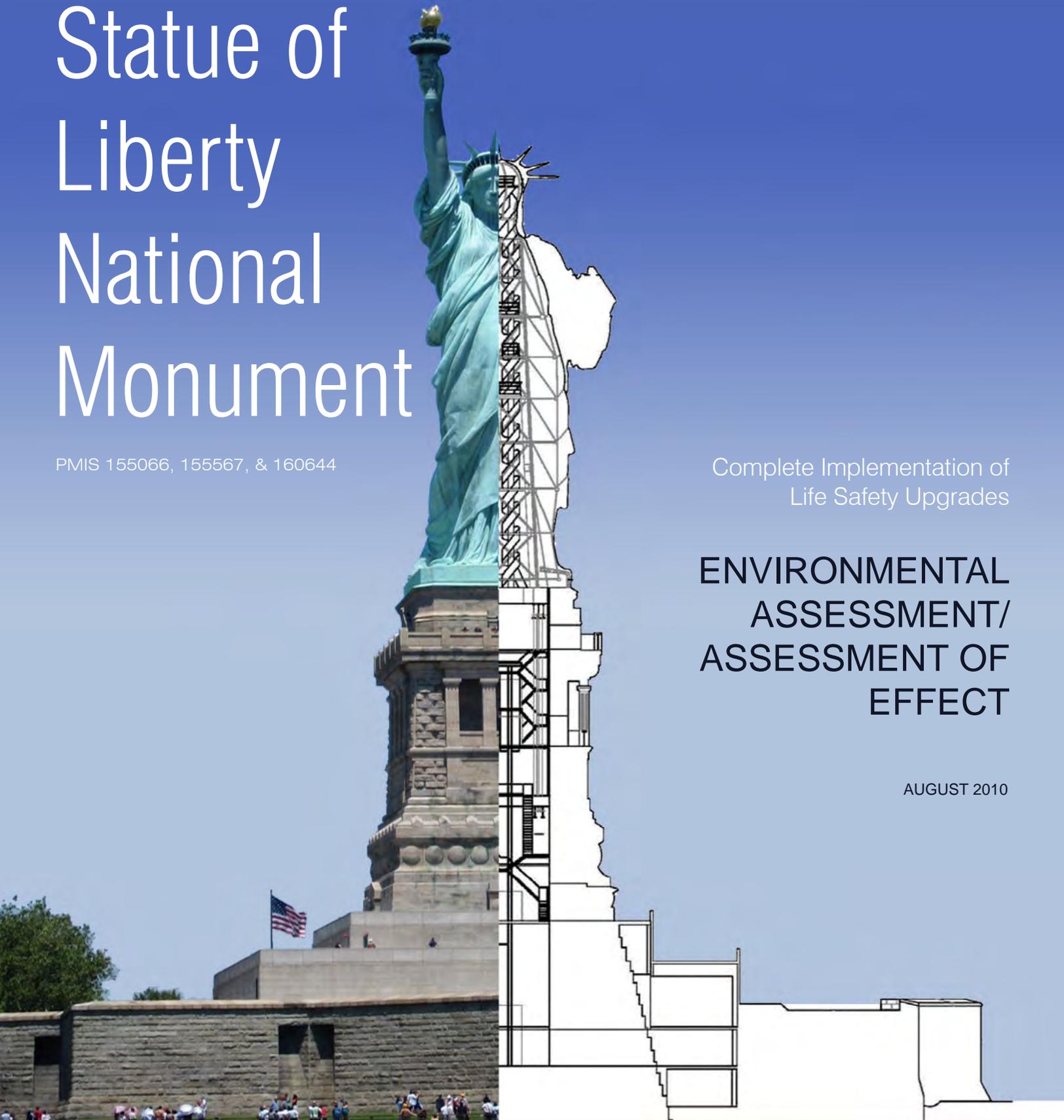
Statue of Liberty National Monument

PMIS 155066, 155567, & 160644

Complete Implementation of
Life Safety Upgrades

ENVIRONMENTAL ASSESSMENT/ ASSESSMENT OF EFFECT

AUGUST 2010



Printed on recycled paper

**National Park Service
U.S. Department of the Interior**



Statue of Liberty National Monument

New York

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Statue of Liberty National Monument – PMIS 155066, 155567, & 160644**

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PROJECT SUMMARY

The National Park Service (NPS) has prepared this Environmental Assessment and Assessment of Effect (EA/AoE) to evaluate a range of alternatives to improve the public safety and accessibility of the Statue of Liberty National Monument.

As a universal icon of freedom and democracy, the statue “Liberty Enlightening the World” (the statue) has become a popular national tourist destination, attracting millions of visitors annually. Due to intensive use over the course of the last century, the NPS has undertaken several rehabilitations to preserve the cultural resources on the island and to enhance visitor experience. The most recent improvements at the monument were completed for the reopening of the crown to visitors on July 4, 2009, and included the addition of handrails on set of two double helical stairs leading to the crown and the removal of two doors to enhance compliance with life safety codes. Improvements are currently proposed because certain other sections of the monument are currently not compliant with life safety and accessibility codes. Upgrades to infrastructure, circulation, and emergency egress within the monument would allow compliance with applicable codes to the maximum extent possible without compromising the historic fabric of the monument.

The range of actions proposed for implementation at the monument involves both the renovation of existing elements and the construction of new features to improve fire safety, accessibility, and circulation within the structure. The proposed actions include the removal of and replacement of existing vertical circulation elements (such as stairs and elevators) and upgrades to the fire safety, ventilation, and lighting systems.

The action alternative is the NPS Preferred Alternative and the implementation thereof would result in long-term beneficial impacts to visitor use and public safety due to improved fire safety, accessibility, and circulation in the monument. There would be long-term beneficial impacts to the historic structure due to the upgraded fire safety system which would enhance the protection and preservation of the monument. There would be short-term minor adverse impacts to visitor use due to the closure of the monument during construction, and short-term negligible adverse impacts to public safety and historic resources. There would be no impairment to Park resources or values as a result of implementing any of the options of the Preferred Alternative.

The action alternative would be undertaken in accordance with the *Secretary of the Interior’s Standards for the Treatment of Historic Properties* and would limit impacts to historic structures. As a result, the project should have “no adverse effect” on historic properties. Because of effects of the project are not fully known at this time, however, a draft Programmatic Agreement (PA) has been prepared, that once signed, will enhance consultation with the State Historic Preservation Officer (SHPO) and Advisory Council on Historic Preservation (ACHP), and better outline the process and schedule for the project’s consultation and any required mitigation. It is available for public review in Appendix C of this document.

This document addresses compliance with both the National Environmental Policy Act (NEPA) of 1969, as amended, and Section 106 of the National Historic Preservation Act (NHPA) of 1966, as amended, and was prepared in accordance with the Council on Environmental Quality (CEQ) "Regulations for Implementing the Procedural Provisions of NEPA" (40 Code of Federal Regulations [CFR] 1500-1508) and Department of the Interior Director’s Order # 12 (DO-12): Conservation Planning, Environmental Impact Analysis, and Decision Making (NPS 2001).

NOTE TO REVIEWERS AND RESPONDENTS:

To comment on this EA, you may mail comments or submit them online within 30 days of the publication of this EA at <http://parkplanning.nps.gov/STLI> and follow the appropriate links. Before including your address, phone number, e-mail address, or other personal identifying information in your comment, you should be aware that your entire comment – including your personal identifying information – may be made publicly available at any time. Although you can ask us in your comment to withhold your personal identifying information from public review, we cannot guarantee that we will be able to do so. Please mail comments to:

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Liberty Island
New York, NY 10004

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CHAPTER 1: PURPOSE AND NEED

INTRODUCTION

The National Park Service (NPS) has prepared this Environmental Assessment (EA) and Assessment of Effect (AoE) to evaluate a range of alternatives to improve the public safety and accessibility of the Statue of Liberty National Monument in a manner that improves the visitor experience while preserving the monument's historic character.

The Statue of Liberty National Monument (hereinafter called "the Park") is an administered unit of the NPS and includes both Ellis Island and Liberty Island. The statue "Liberty Enlightening the World" (the statue) is located on Liberty Island and was a gift from the people of France during the American Centennial; she commemorates the abolition of slavery, democratic government, and the friendship between the two nations that was established during the American Revolution. The statue rests upon a granite pedestal which sits within the historic base of Fort Wood. The term "monument" includes Fort Wood (base), the granite pedestal (pedestal), and the statue.

As a universal icon of freedom and democracy, the statue has become a popular national tourist destination, attracting millions of visitors annually. Liberty Island is visited by nearly four million people a year. Approximately 1.1 million visitors a year (as many as 3,000 per day) are granted access to the pedestal, but only 87,000 visitors a year (only 240 per day) have access to the statue's crown (NPS 2010).

Due to over a century of intensive use, the NPS has undertaken several rehabilitations to maintain optimal visitor experience and preserve the resources within the monument. The most recent improvements at the monument were completed for the reopening of the crown on July 4, 2009, and included the addition of handrails on the set of two double helical stairs leading to the crown and the removal of two doors to enhance compliance with life safety codes. Improvements are currently proposed that include the renovation of existing elements and the construction of new features to improve fire safety, accessibility, and circulation within the structure.

This document addresses compliance with both the National Environmental Policy Act (NEPA) of 1969, as amended, and Section 106 of the National Historic Preservation Act (NHPA) of 1966, as amended, and was prepared in accordance with the Council on Environmental Quality (CEQ) "Regulations for Implementing the Procedural Provisions of NEPA" (40 Code of Federal Regulations [CFR] 1500-1508) and Department of the Interior Director's Order # 12 (DO-12): Conservation Planning, Environmental Impact Analysis, and Decision Making (NPS 2001).

PURPOSE OF AND NEED FOR ACTION

The purpose of the proposed actions is to improve the accessibility and public safety of the Park in a manner that maintains the visitor experience while preserving the monument's historic character.

Action is needed at this time because the monument is currently not compliant with life safety and accessibility codes. Upgrades to infrastructure, circulation, and emergency egress within the monument would allow compliance with applicable codes to the maximum extent possible without compromising the historic fabric of the monument.

Additional improvements to the lighting system, the ventilation system, and existing restrooms on Level 1P are secondary to the life safety improvements, but are needed to improve visitor use and experience and enhance accessibility. The restrooms are currently minimally accessible and are used intensively, requiring periodic refurbishments to ensure continued visitor comfort. Implementing these improvements concurrently with the life safety improvements would be more efficient and cost effective than undertaking them separately.

OBJECTIVES

Objectives are “what must be achieved to a large degree for the action to be considered a success” (NPS 2001) and represent more specific statements of purpose and need. All alternatives selected for detailed analysis must meet all objectives to a large degree and must resolve the purpose of and need for action. The following objectives were identified by the planning team for this project:

1. Improve public safety in the monument by meeting life safety and accessibility codes.
2. Provide visitors and staff with efficient emergency egress from the monument.
3. Minimize disruption to and enhance visitor use and experience in the monument.
4. Preserve the integrity of the cultural resources on Liberty Island.

PROJECT AREA

The proposed actions are located within a 12-acre island in New York City located approximately 1.6 miles southwest of Manhattan known as Liberty Island. The project area is the entirety of Liberty Island, delineated in Figure 1.1. However, the majority of the proposed actions are confined to the monument.

Figure 1.1 – Statue of Liberty National Monument Project Area



The monument is composed of several main components: the base, pedestal, and statue with the interior levels categorized by their location in the pedestal (P) or statue (S). Figure 1.2 shows a cross section through the monument and delineates the main components, levels, and features within the monument, which are described in more detail below.

BASE

The base includes Fort Wood, a fortified military post for New York Harbor in the 19th century. The terreplein was the platform at the top of the walls where heavy guns were mounted. As one of the few remaining star-shaped fortifications from the War of 1812, it is considered a contributing feature to the historic significance of the monument. Additional information regarding the historic significance of this and other components in the monument can be found in “Chapter 3: Affected Environment.”

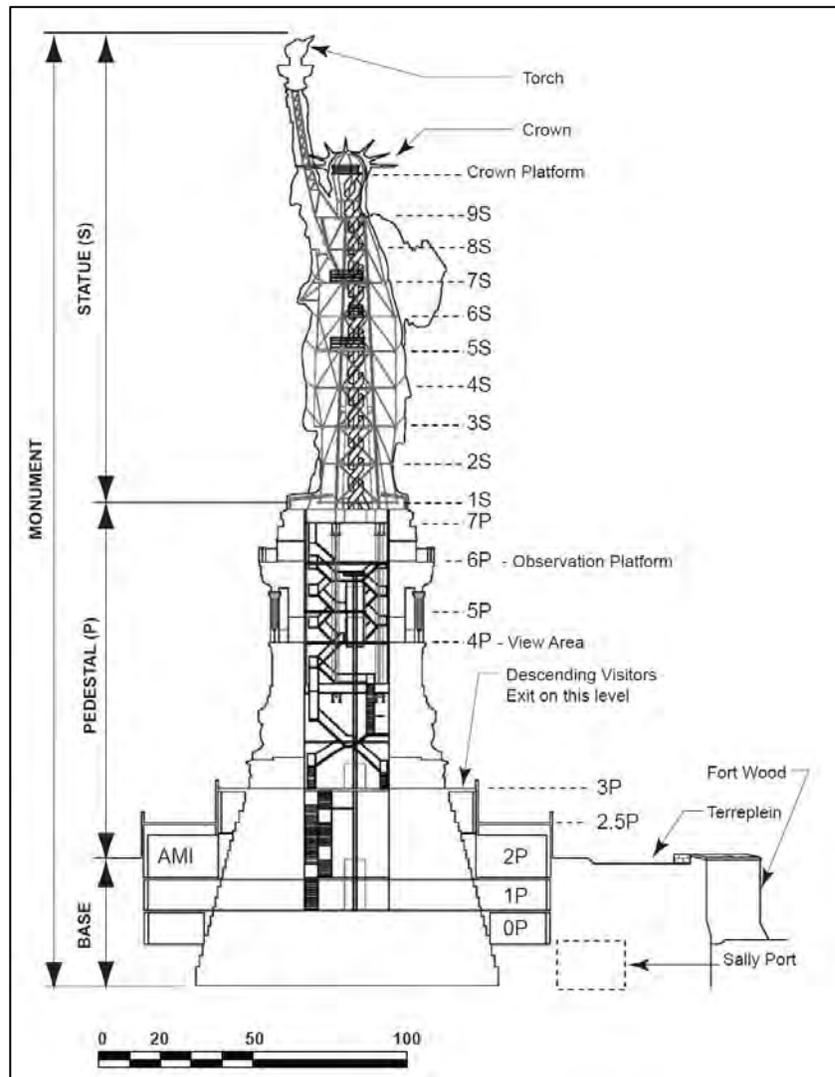
PEDESTAL

The pedestal was designed by Richard Morris Hunt in 1884. It is a concrete, granite-clad structure that supports the statue and is situated within Fort Wood. The pedestal is approximately 150 feet in height with eight levels (Levels 0P to 7P). On Level 2P, there is a large unoccupied space formerly inhabited by the American Museum of Immigration (AMI)¹.

STATUE

The statue, from base to torch, stands approximately 151 feet tall. It is a copper-clad structure with steel supports consisting of multiple levels leading to the crown (Levels 1S to 9S). The crown and observation platform are at the uppermost level of the statue. Held in the statue’s right hand, the torch is her highest and most recognizable feature. The torch is currently accessible to Park staff only.

Figure 1.2 – Cross Section through the Statue



¹ The American Museum of Immigration opened in 1972 and included a permanent exhibition of photos, posters, and artifacts tracing the history of American immigration. It was closed during the renovation in the 1980s and the space is now unoccupied.

PROJECT BACKGROUND

The statue is one of the world's most recognized icons. A gift from the people of France during the American Centennial, she commemorates the abolition of slavery, democratic government, and the friendship between the two nations that was established during the American Revolution. She endures as a highly potent symbol—inspiring contemplation, debate, and protest—of such ideas as liberty, freedom for all people, human rights, democracy, and opportunity. Her design—a technological achievement of its time—continues to represent a bridge between art and engineering (NPS 2009a).

The site for the monument, Bedloe's Island, was selected by its sculptor, Frederic-Auguste Bartholdi, on his first trip to the United States in 1874. This request was authorized by General William T. Sherman. The selected site was inhabited by a defensive fortification built in 1811 and known as Fort Wood (NPS 2000).

The statue was completed in France in July of 1884 and arrived in New York Harbor in June of 1885 (STLI 2010). The statue was reassembled upon a granite pedestal inside the courtyard of Fort Wood and was dedicated on October 28, 1886 (NPS 2000).

Until 1901, the statue functioned as a lighthouse and was managed by the United States Lighthouse Board. After 1901, management and administration of the monument was transferred to the War Department and in 1924, Fort Wood and the statue were collectively declared the Statue of Liberty National Monument (STLI 2010). Jurisdiction of the monument was transferred to the Department of the Interior in 1933, with the U.S. Army retaining the remainder of Fort Wood. The installation was subsequently decommissioned and the jurisdiction of the monument and island was transferred to the NPS in 1937 (NPS 2000). In 1956, through an Act of Congress, Bedloe's Island was renamed Liberty Island. In 1966, the statue was added to the National Register of Historic Places (NRHP), and in 1984, the United Nations designated it as a World Heritage Site.

Throughout its history, the monument has been a popular national tourist destination, attracting two to three million visitors annually. Due to its popularity and its symbolism, it has undergone several rehabilitations throughout its life to maintain optimal visitor experience and public safety. The historical changes to the statue are described in Table 1.1.

The proposed improvements that are the subject of this EA/AoE would complete the life safety upgrades initiated by the NPS in June of 2009 for the opening of the crown on July 4, 2009.

Figure 1.3 Aerial Photo of the Statue Circa 1930s



Table 1.1 – History of Monument Upgrades to Enhance Visitor Use and Experience and Public Safety

1886	The statue is dedicated.
1908-9	The first elevator is installed.
1916	On July 30, the "Black Tom" ² explosion causes damage to the statue. As a result, the original torch and lighting system is modified and the crown is closed to the public.
1931	A more modern system is installed including an elevator, electric transformers, switch panels, automatic clock controls, and a complete new floodlighting system.
1933	War Department funds public works improvements including the improvement of the interior lighting of the statue and various renovations in the pedestal to enhance visitor services.
1937	NPS implements upgrades to address structural faults in the statue and pedestal, due principally to water seepage. Specifically, the NPS completes extensive painting and repointing, repair or replacement of rusted sections of the statue framework and the construction of a copper apron around the bottom of the statue to keep water out of the pedestal.
1945	Further enhancements to the lighting system are made, both to the torch as well as the statue.
1949	A heating system is installed in the base of the monument to alleviate condensation and resultant structural deterioration and to enhance the comfort of visitors and employees.
1982	In May, in anticipation of the statue's 100th birthday, a restoration project is initiated that addresses copper restoration, structural reinforcements, the replacement of the structural iron with stainless steel, the replacement of the original torch with a replica, the replacement of the original stairs, the installation of a new elevator within the pedestal, and the enhancement to the existing climate control system.
1986	On July 5, the newly restored monument opens to the public.
2001	Following the events of 9/11 in 2001, Liberty Island and Ellis Island closed for 100 days before reopening to visitors on December 20, although the monument remains closed.
2004	On August 3, the pedestal is opened for visitation, following fire safety, evacuation and security improvements
2009	In May, the Department of the Interior Secretary Salazar announces that the crown will reopen to visitors by July 4, 2009. To accommodate this deadline, the NPS installs handrails on the set of two double helical stairs in the statue and removes two doors to provide for visitor access consistent with building codes.

² Black Tom was a munitions island in New York Harbor next to Liberty Island that was targeted and destroyed by Germans during World War I. Portions of the statue were damaged by nearby blasts.

PURPOSE AND SIGNIFICANCE OF THE STATUE OF LIBERTY NATIONAL MONUMENT

ESTABLISHMENT

Several key pieces of legislation and policies have informed the development of the Statue of Liberty National Monument:

1. In 1877, a joint resolution by Congress accepted the statue as a gift from France and authorized the president to designate a home for it upon either Governors or Bedloe's Island (NPS 2006).
2. In 1924, by Presidential Proclamation No. 1713, Calvin Coolidge established the Statue of Liberty and the land on which it is situated as a national monument.
3. In 1933, by Executive Order No. 6228, the statue was transferred from the U.S. War Department to the NPS.
4. In 1937, by Presidential Proclamation No. 2250, Franklin D. Roosevelt added the remainder of the island to the Statue of Liberty National Monument.
5. In 1965, by Presidential Proclamation No. 3656, Lyndon B. Johnson added Ellis Island to the Statue of Liberty National Monument.
6. In June 2006, the Senate introduced S.3597 to increase public access to the statue.
7. In July 2007, the House of Representatives introduced H.R.2982, the Save the Statue of Liberty Act, which directed the secretary of the interior, acting through the NPS, to commence necessary safety and related improvements to the statue so full public access comparable to pre-9/11 conditions could resume.
8. In May 2009, Secretary of the Interior Ken Salazar announced the reopening of the crown to the public on July 4, 2009. The proposed actions that are the subject of this EA/AoE would complete the life safety upgrades associated with the reopening of the crown.

PURPOSE

The purpose of Park is to preserve, protect, and interpret the national and international symbols of freedom and migration at Liberty Island and Ellis Island and to promote understanding, reflection, and discussion of the changing meanings of liberty and opportunity.

SIGNIFICANCE

According to the Statement of Significance for the Statue of Liberty National Monument on the United Nations Educational, Scientific and Cultural Organization's (UNESCO) List of World Heritage Sites:

This colossal statue is a masterpiece of the human spirit. The collaboration between the sculptor Bartholdi and the engineer Eiffel resulted in the production of a technological wonder that brings together art and engineering in a new and powerful way.

The symbolic value of the Statue of Liberty lies in two basic factors. It was presented by France with the intention of affirming the historical alliance between the two nations. It was financed by international subscription in recognition of the establishment of the principles of freedom and democracy by the U.S. Declaration of Independence, which the statue holds in her left hand. The

statue also soon became and has endured as a symbol of the migration of people from many countries into the United States in the late 19th and the early 20th centuries. She endures as a highly potent symbol – inspiring contemplation, debate and protest – of ideals such as liberty, peace, human rights, abolition of slavery, democracy and opportunity. (UNESCO 2010)

APPLICABLE FEDERAL LAWS AND REGULATIONS

The NPS is governed by laws, regulations, and management policies, and must adhere to these before, during, and following any management action.

NATIONAL ENVIRONMENTAL POLICY ACT, 1969, AS AMENDED

The NEPA was passed by Congress in 1969 and took effect on January 1, 1970. This legislation established this country’s environmental policies, including the goal of achieving productive harmony between human beings and the physical environment for present and future generations. It provided the tools to implement these goals by requiring that every federal agency prepare an in-depth study of the impacts of “major federal actions having a significant effect on the environment” and alternatives to those actions. It also required that each agency make that information an integral part of its decisions. NEPA also requires that agencies make a diligent effort to involve the interested members of the public before they make decisions affecting the environment.

NEPA is implemented through regulations of the CEQ [40 CFR 1500-1508]. The NPS has in turn adopted procedures to comply with the act and the CEQ regulations, as found in DO-12: Conservation Planning, Environmental Impact Analysis, and Decision Making (NPS 2001) and its accompanying handbook. This document was prepared in accordance with these regulations.

NATIONAL HISTORIC PRESERVATION ACT, AS AMENDED THROUGH 2000 (16 U.S.C. 470)

The NHPA of 1966, as amended through 2000, protects buildings, sites, districts, structures, and objects that have significant scientific, historic, or cultural value. The act established affirmative responsibilities of federal agencies to preserve historic and prehistoric resources. Section 106 requires federal agencies to take into account the effects of their undertakings on historic properties and afford the Advisory Council on Historic Preservation (ACHP) a reasonable opportunity to comment. A historic property is any “prehistoric or historic district, site, building, structure, or object included in or eligible for inclusion in the National Register of Historic Places” (36 CFR 800.16). The historic preservation review process mandated by Section 106 is outlined in regulations issued by ACHP. Revised regulations, “Protection of Historic Properties” (36 CFR Part 800), became effective January 11, 2001.

HISTORIC SITES ACT OF 1935

This act declares as national policy the preservation for public use of historic sites, buildings, objects, and properties of national significance. It authorizes the secretary of the interior, director of the NPS, to restore, reconstruct, rehabilitate, preserve, and maintain historic or prehistoric sites, buildings, objects, and properties of national historical or archeological significance.

NPS ORGANIC ACT OF 1916

By enacting the NPS Organic Act of 1916 (Organic Act), Congress directed the U.S. Department of Interior and the NPS to manage units “to conserve the scenery and the natural and historic objects and wildlife therein and to provide for the enjoyment of the same in such a manner and by such a means as will leave them unimpaired for the enjoyment of future generations” (16 USC § 1). Congress reiterated this mandate in the Redwood National Park Expansion Act of 1978 by stating that NPS must conduct its actions in a manner that will ensure no “derogation of the values and purposes for which these various

areas have been established, except as may have been or shall be directly and specifically provided by Congress” (16 USC 1a-1). Despite these mandates, the Organic Act and its amendments afford the NPS latitude when making resource decisions that balance resource preservation and visitor recreation.

Because conservation remains predominant, the NPS seeks to avoid or to minimize adverse impacts on Park resources and values. However, the NPS has discretion to allow impacts on Park resources and values when necessary and appropriate to fulfill the purposes of a Park (NPS 2006a sec. 1.4.3). While some actions and activities cause impacts, the NPS cannot allow an adverse impact that would constitute impairment of the affected resources and values (NPS 2006). The Organic Act prohibits actions that permanently impair Park resources unless a law directly and specifically allows for the actions (16 USC 1a-1). An action constitutes an impairment when its impacts “harm the integrity of Park resources or values, including the opportunities that otherwise would be present for the enjoyment of those resources or values” (NPS 2006). To determine impairment, the NPS must evaluate “the particular resources and values that would be affected; the severity, duration, and timing of the impact; the direct and indirect effects of the impact; and the cumulative effects of the impact in question and other impacts” (NPS 2006).

ACCESSIBILITY

Pursuant to the Americans with Disabilities Act of 1990 (ADA) and the Architectural Barriers Act of 1968 (ABA), all public buildings, structures, and facilities must comply with specific requirements related to architectural standards, policies, practices, and procedures that accommodate people with hearing, vision, or other disability; and other access requirements (USAB 2005). Public facilities and places must remove barriers in existing buildings and landscapes, as necessary and where appropriate (ADA 2009). The Architectural Barriers Act Accessibility Standard (ABAAS) of 2007 is supplemental guidance for ADA and ABA. NPS must comply with ABAAS for this project.

PRESERVATION BRIEF 32: MAKING HISTORIC PROPERTIES ACCESSIBLE

Following the passage of ADA and ABA, NPS Preservation Brief 32 addresses the complex issue of providing accessibility at historic properties, and underscores the need to balance accessibility and historic preservation. While this brief primarily addresses historic buildings and their sites, it also includes a section regarding historic landscapes, as well as specific examples of independent physical accessibility at historical properties.

DIRECTOR’S ORDERS

Director’s Orders (DO) are listed here: <http://home.nps.gov/applications/npspolicy/dOrders.cfm>

DIRECTOR’S ORDER 17: NATIONAL PARK SERVICE TOURISM

DO-17 promotes and supports sustainable, responsible, informed, and managed visitor use through cooperation and coordination with the tourism industry. This DO provides guidance to the NPS to balance budgetary needs with resource management practices to keep key visitor attractions and services accessible to the public during peak visitation periods. When Park resources must be closed due to construction, this DO directs Park superintendents to communicate these closures with the tourism industry. Park superintendents are responsible for informing visitors, state tourism offices, gateway communities, and tourism-related businesses about current conditions of key Park resources including current protection, recovery, and restoration measures.

DIRECTOR’S ORDER 28: CULTURAL RESOURCE MANAGEMENT

DO-28 calls for the NPS to protect and manage cultural resources in its custody through effective research, planning, and stewardship and in accordance with the policies and principles contained in the

NPS 2006 *Management Policies* (NPS 2006a). This order also directs the NPS to comply with the substantive and procedural requirements described in the *Secretary of the Interior's Standards and Guidelines for Archeology and Historic Preservation*; the *Secretary of the Interior's Standards for the Treatment of Historic Properties with Guidelines for Treatment of Cultural Landscapes*; and the *Secretary of the Interior's Standards for the Treatment of Historic Properties with Guidelines for Preserving, Rehabilitating, Restoring and Reconstructing Historic Building*. Additionally, the NPS will comply with the 2008 Service-wide Programmatic Agreement with the ACHP and the National Conference of State Historic Preservation Officers. The accompanying handbook to this order addresses standards and requirements for research, planning, and stewardship of cultural resources as well as the management of archeological resources, cultural landscapes, historic and prehistoric structures, museum collections, and ethnographic resources.

DIRECTOR'S ORDER 42: ACCESSIBILITY FOR PARK VISITORS

DO-42 approaches the issue of accessibility in a comprehensive, organized way, rather than on a project-by-project basis. The primary goal of the program is to develop and coordinate a system-wide, comprehensive approach to achieving the highest level of accessibility that is reasonable, while ensuring consistency with the other legal mandates of conservation and protection of the resources that the NPS manages. Since 1980, the NPS has been working with accessibility coordinators in each regional office, and in Parks and program offices, to: (1) assess the level of accessibility of various Parks; (2) identify the barriers to accessibility; (3) develop policies and guidelines regarding appropriate methods and techniques for improving access; and (4) provide technical assistance and in-service training on effective approaches and program implementation. The NPS employs the principles of universal design in providing facilities for everyone, rather than for only a portion of the population, including those persons with invisible disabilities such as cardiac and respiratory problems; those who have temporary disabilities such as broken arms or legs; and parents with strollers and wheeled devices.

DIRECTOR'S ORDER 50C: PUBLIC RISK MANAGEMENT PROGRAM

DO-50c emphasizes the prevention of visitor incidents by providing guidelines for establishing a risk management process, while still preserving natural and cultural resources. Consideration for visitor safety will be built into the planning and design process for NPS facilities. This DO directs the NPS to inspect and update all pre-existing visitor use facilities to meet life safety codes and other state and national safety standards.

DIRECTOR'S ORDER 58: STRUCTURAL FIRE MANAGEMENT

The purpose of this document is to supplement the structural fire policy articulated in *NPS Management Policies 2006* by dictating operational policies and procedures necessary to establish and implement structural fire management programs. This DO seeks to help NPS managers preserve and protect Park visitors and resources through emergency management, fire prevention, detection, suppression, and post-fire rehabilitation.

NPS MANAGEMENT POLICIES

The *NPS Management Policies 2006* (NPS 2006a) is the basic NPS-wide policy document, adherence to which is mandatory unless specifically waived or modified by the NPS director or certain departmental officials, including the U.S. secretary of interior. Actions under this EA/AoE are in part guided by these management policies. Sections which are particularly relevant to this project are as follows:

SECTIONS 1.4.5, 1.4.6, AND 1.4.7 – IMPAIRMENT OF PARK RESOURCES AND VALUES

According to *NPS Management Policies 2006*, an action constitutes an impairment when an impact

“would harm the integrity of park resources or values, including the opportunities that otherwise would be present for the enjoyment of those resources or values” (NPS 2006).

Whether an impact meets this definition depends on the particular resources and values that would be affected; the severity, duration, and timing of the impact; the direct and indirect effects of the impact; and the cumulative effects of the impact in question and other impacts. An impact on any park resource or value may constitute an impairment, but an impact would be more likely to constitute an impairment to the extent that it affects a resource or value whose conservation is:

- necessary to fulfill specific purposes identified in the establishing legislation or proclamation of the park;
- key to the natural or cultural integrity of the park or to the opportunity for enjoyment of the park; or
- identified as a goal in the park’s general management plan or other relevant NPS planning documents

Impairment may result from NPS activities in managing the Park, visitor activities, or activities undertaken by concessioners, contractors, and others operating in the Park. This determination on impairment has been prepared for the preferred alternative described on pages 28 and 29 of this EA. An impairment determination is made for all resource impact topics analyzed for the preferred alternative. An impairment determination is not made for visitor experience and public safety because impairment findings relate back to park resources and values, and these impact areas are not generally considered to be park resources or values according to the Organic Act, and cannot be impaired in the same way that an action can impair park resources and values.

SECTION 5.3.1 - PROTECTION AND PRESERVATION OF CULTURAL RESOURCES

The NPS will endeavor to protect cultural resources against overuse, deterioration, environmental impacts, and other threats without compromising the integrity of cultural resources (NPS 2006a).

SECTION 8.2.5.1 - VISITOR SAFETY

The NPS strives to protect human life and provide for injury-free visits. As a result, the NPS will apply national safety codes and standards to prevent injuries or recognizable threats to visitor safety and will reduce or remove known hazards. Examples of visitor safeguards include the installation of artificial lighting or paved walking surfaces (NPS 2006a).

SECTION 9.1.1.3 - PROTECTION OF CULTURAL VALUES

The NPS will make every effort to use existing contributing structures when important cultural resources are present. Any new structures including those for visitor and administrative uses will be consistent with the historic and visual character of the area and will harmonize with the present cultural resources in proportion, color, and texture. However, no attempts will be made to duplicate or mimic a historic design, nor will any modern construction be portrayed to the public as historic. Compliance with the ACHP’s regulations on “Protection of Historic Properties” (36 CFR § 800) will precede any developments (NPS 2006a).

SECTION 9.1.2 - ACCESSIBILITY FOR PERSONS WITH DISABILITIES

The NPS will provide accessible facilities and resources in a manner that is consistent with preserving Park resources and providing visitor safety and high-quality visitor experiences. The policy states that “in most instances, the degree of accessibility provided will be proportionately related to the degree of human-made modifications in the area surrounding the facility and the importance of the facility to people visiting or working in the park” (NPS 2006a).

SECTION 9.1.8 - STRUCTURAL FIRE PROTECTION AND SUPPRESSION

The NPS will manage structural fire activities as part of a comprehensive interdisciplinary effort to protect resources and promote safe and appropriate public enjoyment of those resources. Fire prevention, protection, and suppression will be primary considerations in the design, construction, rehabilitation, and maintenance of all NPS facilities. Each superintendent is directed to complete a structural fire assessment and to develop a fire management plan. Fire prevention will be accomplished during construction of new facilities, as well as during inspection, maintenance, rehabilitation, and upgrading of current facilities (NPS 2006a).

SCOPING PROCESS AND PUBLIC PARTICIPATION

NEPA regulations require an “early and open process for determining the scope of issues to be addressed and for identifying the significant issues related to a proposed action.” To determine the scope of issues to be analyzed in depth in this plan, meetings were conducted with Park staff and the public.

In addition to internal and agency scoping, public scoping for this EA/AoE began March 12, 2010, and concluded April 12, 2010. During this time, public comments were accepted on the NPS Planning, Environment and Public Comment (PEPC) website and by mail. The purpose of public scoping was to solicit public input on the purpose, need, and objectives of the project, major issues, and potential alternatives.

During the 30-day public comment period, one comment was received from the U.S. Fish and Wildlife Service (USFWS). The agency instructed the NPS to verify which federally listed species may occur in the project area. After reviewing a database of federally listed species within the project area’s municipality of Jersey City, New Jersey, the NPS verified that the proposed project has a no effect determination for federally listed species because there are no extant, historic, or potentially occurring federally listed species within the project area.

AREA OF POTENTIAL EFFECT

In accordance with the ACHP’s regulations implementing Section 106 (36 CFR Part 800, protection of Historic Properties), NPS in consultation with the SHPO determined that the Area of Potential Effect (APE) for this project “includes the entire Liberty Island, although construction activity will be limited to the immediate vicinity of the Statue and Fort Wood” (NPS 2010). Additionally, NPS has identified historic properties within the APE, including buildings, structures, sites, objects and districts, and found that the monument is the only historic property that has the potential to be affected by this project. The rationale for analyzing or dismissing historic properties from consideration in this NEPA document is included in the discussion of impact topics in the next section.

ISSUES AND IMPACT TOPICS ANALYZED IN THIS EA/AoE

VISITOR USE AND EXPERIENCE

The proposed life safety upgrades would result in impacts to visitor use and experience, affecting circulation, accessibility, and the visual character in the monument. During construction, the monument would be closed for up to one year, which would also affect visitor use and experience at the Park. As a result of potential impacts to visitor use and experience, including aesthetics and visual resources, that would result from implementation of the action alternative, this resource area is addressed as an impact topic in this document.

PUBLIC SAFETY

At present, portions of the pedestal and the statue do not meet basic life safety codes. The proposed actions would help the monument better achieve life safety code compliance, likely resulting in beneficial impacts to public health and safety. As a result of potential impacts to public health and safety that would occur from both the no action and action alternatives, this resource area is addressed as an impact topic in this document.

HISTORIC STRUCTURES

The Statue of Liberty National Monument, which includes Ellis Island and Liberty Island, was listed on the NRHP on October 15, 1966. In addition, the monument was added to the list of World Heritage Sites in 1984. As a historic structure, the range of proposed actions could affect the contributing features of the monument, and associated structures and buildings. As a result, historic structures are addressed as an impact topic in this document.

IMPACT TOPICS DISMISSED FROM FURTHER ANALYSIS

During the scoping process, a number of topics were initially considered for analysis in this EA/AoE but were subsequently eliminated from detailed analysis following discussions with the Park staff and public scoping input.

AIR QUALITY

The 1963 Clean Air Act, as amended (42 USC 7401 et seq.), requires federal land managers to protect air quality in national parks. The project site is located in the New York Metropolitan nonattainment zone for ozone. During construction, local air quality would be temporarily affected by dust and construction equipment emissions during the construction period. Overall, there would be a temporary degradation of local air quality due to dust and exhaust generated by construction activities, but these effects would be localized and negligible. The Park's current level of air quality would not be affected by the proposed actions; therefore, this impact topic was dismissed from further analysis in this document.

CLIMATE CHANGE

Impacts of the proposed actions on climate change would be mainly due to emissions of nitrous oxides and carbon dioxide from the burning of fuel in vehicles and construction equipment. These emissions could cause increases in "greenhouse gases" that contribute to global climate change. Most of the observed temperature increases can be attributed to human activities that contribute heat-trapping gases to the atmosphere (IPCC 2007). However, these emissions would be negligible in comparison to other local and regional sources of greenhouse gas emissions. Therefore, this impact topic was dismissed from further analysis in this document.

ARCHEOLOGICAL RESOURCES

Archeological resources are defined by the NPS as any "any material remains of human life or activities which are at least 100 years of age, and which are of archaeological interest" (NPS 1997). Guidance for the identification and evaluation of archeological resources is found in National Register Bulletin #36, *Guidelines for Evaluating and Registering Archeological Properties* (NPS 2000).

Archeological investigations have been conducted on Liberty Island since 1937 by NPS archeologists (Griswold et al. 2003). These investigations have provided the NPS with an excellent understanding of the archeological remains and areas of archeological sensitivity within Liberty Island. As ground disturbance to archeologically sensitive areas is not anticipated as part of the proposed project, archeological resources are dismissed as an impact topic. However, in accordance with the 2010 Programmatic Agreement for the proposed Life Safety Upgrades to the Statue of Liberty between the NPS, the New York State Historic Preservation Officer (NYSHPO) and the Advisory Council on Historic Preservation (ACHP), the NPS will determine if terrestrial archeological investigations are necessary in consultation with the NYSHPO and Native American Tribes should the proposed project be redesigned and/or if ground disturbances in archeologically sensitive areas are proposed. Therefore, this impact topic was dismissed from further analysis in this document.

ETHNOGRAPHIC RESOURCES

Ethnographic resources are defined by the NPS as any "site, structure, object, landscape, or natural resources feature assigned traditional, legendary, religious, subsistence or other significance in the cultural system of a group traditionally associated with it" (NPS 1998). In this analysis, the NPS' term "ethnographic resources" is equivalent to the term "Traditional Cultural Property" (TCP) which is more widely used in cultural resource management. A TCP is generally eligible for inclusion in the National Register "because of its association with cultural practices or beliefs of a living community that are rooted in that community's history, and which are important in maintaining the continuing cultural identity of the community" (NPS 1998). Guidance for the identification of ethnographic resources is found in National Register Bulletin #38, *Guidelines for Evaluating and Documenting Traditional Cultural Properties* (NPS 1998). There are no properties that meet the definition of a TCP within the area of potential effect (APE); therefore, this impact topic was dismissed from further analysis in this document.

CULTURAL LANDSCAPES

Cultural landscapes are defined by the NPS as "a geographic area, including both cultural and natural resources and the wildlife or domestic animals therein, associated with a historic event, activity, or person or exhibiting other cultural or aesthetic values" (Birnbaum 1996). Liberty Island has been inventoried by the NPS cultural landscape program, however due to an extensive redesign of the grounds undertaken in 1986, the significance of the cultural landscape is still unclear and is currently being studied as part of an update to the National Register of Historic Places listing for the monument. The proposed project would have temporary negligible impacts to the cultural landscape during construction due to staging of materials, but would not have any lasting impacts; therefore, this impact topic was dismissed from further analysis in this document.

MUSEUM COLLECTIONS

The museum objects on display at the monument illustrate the history and symbolism of the statue through artifacts, photos, prints, videos, museum objects, and oral histories. Full-scale replicas of the statue's face and foot and a scale model of the statue are among the displays (STLI 2010). The history-related displays are divided into sections that include: From Idea to Image, Fabricating the State, Stretching Technology, Fundraising in France, The Pedestal, Fundraising in America, and Complete at Last. The sections depicting the symbolism of the Statue of Liberty include: Mother of Exiles, Becoming

the Statue of America, Century of Souvenirs, The Image Exploited, and The Statue in Popular Culture (STLI 2010). At the Torch Exhibit, the original 1886 torch with its much-altered flame comprise the centerpiece of the lobby. The torch, which was carefully taken down from the statue in 1985 during its restoration, is displayed in a manner that provides a 360-degree view from inside the main lobby and from the balcony on the second floor (STLI 2010). The museum objects would be packed and stored at Ellis Island during the duration of the project. Those objects that are too large to move would be carefully protected in place. All museum objects will be handled in accordance with NPS guidelines pursuant to the NPS Museum Handbook (NPS 2006b). Because the museum collections in storage or on display would not be impacted by this project, this impact topic was dismissed from further analysis in this document.

ENVIRONMENTAL JUSTICE

Executive Order 12898, “General Actions to Address Environmental Justice in Minority Populations and Low-Income Populations,” requires all federal agencies to incorporate environmental justice into their missions by identifying and addressing the disproportionately high and/or adverse human health or environmental effects of their programs and policies on minorities and low-income populations and communities. According to the EPA, environmental justice is the “...fair treatment and meaningful involvement of all people, regardless of race, color, national origin, or income, with respect to the development, implementation, and enforcement of environmental laws, regulations and policies. Fair treatment means that no group of people, including a racial, ethnic, or socioeconomic group, should bear a disproportionate share of the negative environmental consequences resulting from industrial, municipal, and commercial operations or the execution of federal, state, local, and tribal programs and policies.”

The goal of “fair treatment” is not to shift risks among populations, but to identify potentially disproportionately high and adverse effects and identify alternatives that may mitigate these impacts. The communities surrounding the Park contain both a minority and low-income population. However, implementation of the proposed action would not result in any identifiable adverse human health effects so there would be no direct or indirect adverse impacts on any minority or low income population. Moreover, the impacts associated with implementation of the proposed action would not disproportionately affect any minority or low-income population or community nor would implementation of the proposed action result in any identified effects that would be specific to any minority or low-income community. Therefore, this impact topic was dismissed from further analysis in this document.

FLOODPLAINS

Executive Order 11988: Floodplain Management provides for the protection of floodplain values, while NPS DO-77-2: Floodplain Management Guidelines provides the NPS with requirements for implementing the executive order. Although the project area is within the 100-year floodplain, there would be no modification of the floodplain because the majority of construction would be contained within the interior of the monument. The proposed actions would not increase the flood risks and there would be no adverse impacts to existing development from flooding and no adverse impacts to existing development from flooding. As a result, floodplain functions, values, and flood flows would not be affected and compliance with DO-77-2 is not necessary. Therefore, this impact topic was dismissed from further analysis in this document.

GEOLOGY AND TOPOGRAPHY

The proposed actions would involve minor excavation in a pre-existing artificial mound. However, there would be no grading and no disruption to geological or topographical resources; therefore, this impact topic was dismissed from further analysis in this document.

LAND USE

NPS 2006 *Management Policies* provides for the protection of Park lands, federal lands, and privately owned lands adjacent to Park units. The proposed alternatives would be consistent with and would support the Statue of Liberty National Monument's plans and policies, and would not change land use in the project area; therefore, this impact topic was dismissed from further analysis in this document.

MARINE OR ESTUARINE RESOURCES

The scope of proposed actions would not affect New York Harbor or the shoreline because construction would be confined to the monument so no marine or estuarine resources would be affected. Therefore, this impact topic was dismissed from further analysis in this document.

NATURAL SOUNDSCAPES

In accordance with NPS 2006 *Management Policies* (NPS 2006a) and Director's Order #47, Sound Preservation and Noise Management, an important part of the NPS mission is preservation of natural soundscapes associated with national park units. Natural soundscapes exist in the absence of human-caused sound. The natural ambient soundscape is the aggregate of all the natural sounds that occur in park units, together with the physical capacity for transmitting natural sounds. The project area is an urbanized setting, where the protection of a natural ambient soundscape and/or the opportunity for visitors to experience natural sound environments is not an objective. Protection of a natural ambient soundscape and/or opportunity for visitors to experience natural sound environments is not a consideration for the Liberty Island; therefore, this impact topic was dismissed from further analysis in this document.

PARK MANAGEMENT AND OPERATIONS

The proposed actions would result in impacts to Park operations and maintenance resulting from the installation of new components and equipment in the monument that would affect operating costs and staffing. However, the temporary changes in dealing with the contractors and staff would represent a redeployment of resources and not a net increase or decrease in management or operations. As a result, impacts to Park management and operations that would occur from both the action alternatives would be negligible or minor; therefore, this impact topic was dismissed from further analysis in this document.

PRIME FARMLAND

Prime farmland is defined as land with the best combination of physical and chemical characteristics for producing food, feed, forage, fiber, and oilseed crops and which is also available for these uses. Prime farmland is protected under the Farmland Protection Act of 1981 to minimize the extent to which federal programs contribute to the unnecessary or irreversible conversion of farmland to nonagricultural uses. No prime farmlands are found within the project area; therefore, this impact topic was dismissed from further analysis in this document.

SOCIOECONOMICS

Implementation of the proposed action could provide a beneficial impact to the economies of nearby area (e.g., minimal increase in employment opportunities for the construction workforce and revenues for local businesses and government generated from construction activities and workers), and short-term impacts to the concessionaires and tourism resulting from the closure of the monument for up to one year. However, since Liberty Island would remain open and Ellis Island would not be affected during construction, visitation to the Park is expected to remain relatively stable and impacts to Park concessionaires and associated tourism businesses would be negligible. Therefore, this impact topic was dismissed from further analysis in this document.

THREATENED AND ENDANGERED, RARE, AND SPECIAL CONCERN SPECIES

The Endangered Species Act (1973), as amended, requires an examination of impacts on all federally listed threatened or endangered species. NPS policy also requires examination of the impacts on state or locally listed species. Based on a review of the USFWS' New Jersey and New York field offices' web sites listing of federally listed species, there are no federally listed species or habitat that may be affected by the project. Although the endangered shortnose sturgeon may be present in adjacent waters, there is no shoreline or in-water construction work associated with the proposed project. Therefore, it is the determination of the NPS that there would be no effect on any federally listed species. There are also no known occurrences of rare or state threatened animals or plants, significant natural communities, or other significant habitats that would be affected by the project. Therefore, this impact topic was dismissed from further analysis in this document.

UNIQUE ECOSYSTEMS, BIOSPHERE RESERVE, AND WORLD HERITAGE SITES

There are no known biosphere reserves or unique ecosystems listed in the Park. The monument is listed as a UNESCO World Heritage Site defined by the NPS 2006 *Management Policies* as "parks... believed to possess outstanding universal value to mankind" (NPS 2006a). However, the proposed actions would not affect this designation or alter the global and national significances of the monument; therefore, this impact topic was dismissed from further analysis in this document.

URBAN QUALITY AND GATEWAY COMMUNITIES

CEQ regulations (40 CFR §1502.16[g]) require NPS analysis of the proposed project's effects on urban quality and the design of the built environment. Although the project area is located within the larger context of New York Harbor and the New York Metropolitan area, the proposed actions will not impact the monument's relationship with these surrounding communities or the overall design of these areas; therefore, this impact topic was dismissed from further analysis in this document.

TRAFFIC AND TRANSPORTATION

Construction activity resulting from implementation of the proposed actions would not introduce a noticeable effect on the existing traffic within New York Harbor since it is one of the busiest waterways in the nation. It hosts the port facilities of New York and New Jersey, and in addition to the shipping channel traffic, the harbor also has dense patterns of use from cruise lines, commuter ferries, and tourist excursion boats. Any new boat traffic to support construction activity for this project would have a negligible effect; therefore, this impact topic was dismissed from further analysis in this document.

VEGETATION

The proposed actions are primarily confined to the interior of the monument. Although, some turf would be removed and replaced if implementation of the action alternative is undertaken and a new domestic water storage tank is installed. In addition, the staging areas outside of Fort Wood would affect turf areas. However, impacts are expected to be minimal and negligible in intensity; therefore, this impact topic was dismissed from further analysis in this document.

WATER RESOURCES

NPS policies require water quality protection consistent with the Clean Water Act, the purpose of which is to restore and maintain the quality and integrity of the nation's waters. The proposed actions will not directly impact water resources. Water quality, water quantity, and drinking water are not expected to be affected by the project. Because the project results in no impacts to water resources; therefore, this impact topic was dismissed from further analysis in this document.

WETLANDS

There are no wetlands that would be affected by any of the proposed actions; therefore, this impact topic was dismissed from further analysis in this document.

WILDLIFE

The project area is a small island predominately composed of the monument, visitor amenities, NPS buildings and houses, and paved walking areas. It is set within a harbor that experiences heavy commercial and industrial boat traffic. As a result, wildlife in the project area consists primarily of common urban species such as pigeons, squirrels, rats, mice, crows, and seagulls. Although construction-related activities may temporarily displace wildlife from the area, the proposed action would not result in greater than negligible effects on wildlife or wildlife habitat. Furthermore, wildlife numbers are relatively low due to high human activity and limited habitat. Therefore, this impact topic was dismissed from further analysis in this document.

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CHAPTER 2: ALTERNATIVES

INTRODUCTION

The National Environmental Policy Act (NEPA) requires that federal agencies explore a range of reasonable alternatives when proposing and analyzing projects. The alternatives under consideration must include the “no action” alternative as prescribed by 40 CFR 1502.14. Any alternative analyzed must meet the management objectives of the Park, either wholly or partially, while also meeting the purpose of and need for the project. Project alternatives may originate from the proponent agency, local government officials, or members of the public. Alternatives may also be developed during the early stages of project development at public meetings or in response to comments from coordinating or cooperating agencies. The alternatives analyzed in this document are the result of internal scoping, public scoping, and agency consultation. The components of the action alternative represent the outcome of collaboration between the National Park Service (NPS), the consulting project team’s designers and engineers, and the New York State Historic Preservation Officer (SHPO).

The NPS explored and objectively evaluated a range of alternatives. After evaluation, two alternatives were carried forward for analysis: the no action alternative, and the proposed action to implement the upgrades, which was also identified as the NPS preferred alternative. The no action alternative represents a continuation of the existing operations, maintenance, and visitor use within the monument with no changes to the vertical circulation, fire safety, or mechanical systems whereas the action alternative includes the renovation of existing elements and the construction of new features to improve circulation, accessibility, and fire safety within the structure. The alternatives are described in more detail below and are summarized in Table 2.1.

ALTERNATIVE 1: NO ACTION

The no action alternative represents a continuation of the existing operations, maintenance, and visitor use within the monument with no changes to the circulation, accessibility, or fire safety. There are currently numerous deficiencies with the monument that present obstacles to achieving full compliance with building codes for fire safety and accessibility.

FIRE SAFETY SYSTEM

The fire safety system¹ would continue to lack basic components such as a smoke exhaust system, fire and smoke barriers, and an enclosed or pressurized stairwell that would enable staff and visitors a safe passage for emergency egress during a fire. The monument would continue to be non compliant with the National Fire Protection Association (NFPA) 13 code. In addition, the water supply for the fire suppression system (sprinklers) would continue to operate with low pressure and capacity. During a fire emergency, staff and visitors within the monument would be vulnerable to the effects of smoke.

ACCESSIBILITY AND CIRCULATION

Visitors would continue to circulate through the pedestal using the existing open staircases between Levels 1P and 7P that wrap around the inside of the interior perimeter walls. There would be no changes

¹ Fire safety systems consist of both active and passive fire protection components. Active fire protection includes fire detection devices, alarms, and fire suppression elements such as sprinklers and smoke exhaust systems. Passive fire protection includes the compartmentalization of portions of the structure through the use of fire-rated walls and floors (fire and smoke barriers) and enclosed stairwells to prevent the spread of fire or smoke and to enable a safe means of egress.

to the alignment or configuration of the stairs, which are narrower and steeper than what is allowed by code. The stairs would continue to be single directional, with one used for ascent and the other used for descent. The width of the existing stairs is not code compliant.

The descending stair would continue to discharge visitors from Level 3P to the exterior of the pedestal where they would descend to the terreplein level and then utilize one of two wood staircases to reach ground level (see Figure 2.1). This method of egress is not compliant with the life safety code which requires two distinct and physically separate methods of egress to the ground level from the point of discharge. Currently, there is only one exterior staircase to the terreplein on the north side of the pedestal.

There would be no changes to the set of two double helical stairs in the statue that provide access to and from the crown.

Only portions of the pedestal are accessible to persons in wheelchairs and there is no accessibility within the statue. There is currently only elevator access to Level 5P with a small emergency elevator serving Levels 1P through 8S. However, the emergency elevator is limited in size and is intended to accommodate only two people standing. Therefore, persons in wheelchairs cannot access levels above 5P in the monument, including the observation platform at Level 6P and any level of the statue.

OTHER IMPROVEMENTS

Under the no action alternative, there would be no changes to the existing lighting system, restrooms, or ventilation system² in the monument.

The lighting fixtures would continue to provide relatively low levels of illumination throughout the pedestal, posing potential risks to public safety and inhibiting full visual access to the historic fabric in the pedestal, including the Eiffel beams.

The restrooms on Level 1P would remain unchanged and would continue to provide adequate service to visitors within the monument. However, the materials and fixtures are nearly 25 years old and the layout is minimally compliant with the Architectural Barriers Act Accessibility Standard (ABAAS).

The four existing air handling units on Level 7P would not be upgraded and would continue to manage the monument's climate control system and mitigate against condensation.

ALTERNATIVE 2: ACTION: IMPLEMENT LIFE SAFETY AND FIRE SAFETY UPGRADES FOR THE MONUMENT (NPS PREFERRED)

The action alternative describes proposed improvements that are a continuation of life safety upgrades initiated in June 2009 as part of the reopening of the crown on July 4, 2009.

The range of actions proposed for implementation at the monument is complex and involves both the renovation of existing elements and the construction of new features in the pedestal to improve life safety, emergency egress, and fire safety within the structure. The configuration of new elements within the monument is constrained by several factors, mainly the relatively small footprint of the pedestal and the existing structural elements such as the historic Eiffel beams (between Levels 3P and 4P and at Level 7P) and concrete counterweights, which are fixed structural elements that cannot be modified. More detailed information regarding the Eiffel beams is provided in the Cultural Resources section of "Chapter 3: Affected Environment."

² Ventilation includes both the circulation of air within the monument as well as the introduction of outside air. Proper ventilation is a critical factor in preventing the stagnation of the interior air and removing excessive moisture to prevent corrosion of the statue's copper and steel structure. Currently, there are four air handling units on Level 7P that force air throughout the statue.

FIRE SAFETY SYSTEM

The secondary elements of the project include proposed actions to enhance the fire safety within the monument. These proposed actions were designed to be integrated and to blend harmoniously with the proposed vertical circulation elements. For example, the proposed enclosed and pressurized interior staircases would also serve as emergency egress stairs for life safety within the monument. The enhancements to the fire safety system include the following proposed modifications:

1. Construct a fire and smoke barrier between Levels 5P and 6P.
2. Install a smoke exhaust system to serve portions of the monument not otherwise improved.
3. Install an additional water storage tank immediately adjacent to the existing two underground tanks located in the NPS administrative area of Liberty Island.

ACCESSIBILITY AND CIRCULATION

The primary elements of the proposed modifications affect vertical circulation such as visitor access and egress to and from the monument and include the replacement of the stairs and elevators within the monument. To accommodate the new configuration of these elements, several portions of the pedestal and base would be affected. The proposed modifications to the vertical circulation system include:

1. The removal of the existing exterior wood stairs on the terreplein that connect to the ground level (see Figure 2.1). These stairs installed as a temporary means of descent to ground level and were meant to be removed at some time in the future as a condition of agreement with the SHPO.
2. The removal of the existing two sets of interior stairs within the pedestal that connect Levels 3P to 6P. Stairs above Level 6P would remain in place.
3. The construction of two new stairs inside a pressurized, 2-hour fire rated construction that would connect Levels 1P to 6P. One stairwell would be used for ascent and one would be used for descent during normal visitor operation. During an emergency, both could be used for descent.

The enclosure would have glass openings placed to maximize visibility to the interior of the pedestal and historic features such as the Eiffel beams.

4. The construction of exterior stairs on the south side of the pedestal that transition visitors from Level 3P (where the interior stairs discharge visitors exiting the monument) to ground level; The new stairs would mirror the configuration of exterior stairs on the north side of the pedestal that connect Level 3P and the terreplein. The new stairs would require a penetration through the terreplein and into the American Museum of Immigration (AMI) space to access the sally port, the original entrance to Fort Wood, where visitors would exit the

Figure 2.1 – Aerial Photo of the North Side of the Monument



monument. There is currently a storm drain at this location on the terreplein, and under the action alternative, it would be rerouted.

5. The construction of a new exterior stair on the north side of the terreplein to accommodate visitor egress to the ground level; The new stair would require a penetration through the terreplein but no penetration through the historic walls of Fort Wood and would discharge into the existing main entry vestibule (see Supplemental Design Information in Appendix E).
6. The removal of the existing main elevator and the installation of a new elevator connecting Levels 1P and 5P; the elevator would be situated between the two new interior staircases (see Supplemental Design Information in Appendix E).
7. The removal of the existing emergency elevator that connects Levels 1P and 8S, the installation of a new supplemental elevator lift connecting Levels 5P and 6P, and a new emergency elevator connecting Levels 6P and 7S; the new elevator lift would provide wheelchair accessibility between Levels 5P and 6P. Level 6P will be largely reconfigured with new stair landing locations and the new supplemental lift in the northeast corner (see Supplemental Design Information in Appendix E).

OTHER IMPROVEMENTS

Throughout the base and pedestal, the lighting system would be upgraded to enhance energy efficiency, provide better illumination along the stairways, and enable better visibility of the historic Eiffel beams.

The restrooms on Level 1P, which are heavily used and therefore require periodic improvement, would be made fully accessible and refurbished as feasible.

On Level 7P, the four air handling units would be replaced to provide better ventilation and climate control in the statue.

Table 2.1 – Description of the No Action and Action Alternatives

Location	Alternative 1 : No Action	Alternative 2: Action Alternative: Implement Life Safety and Fire Safety Upgrades for the Monument (NPS Preferred)
Fire Safety Modifications	There would continue to be no fire or smoke barriers in the monument.	The monument would be compartmentalized utilizing enclosed, fire rated stairways and elevator lobby as well as a fire and smoke barrier located between levels 5P and 6P.
	There would continue to be no smoke exhaust or pressurization system in the monument.	Install a smoke exhaust system.
	The two existing underground water storage tanks located in the administrative area of Liberty Island would continue to provide the water supply for the fire system.	Install a third water storage tank to supplement the water supply for fire system.
Vertical Circulation Modifications	<p>The interior pedestal stairs would remain in place and the current pattern of circulation would remain unchanged.</p> <p>The exterior wood stairs at the terreplein would remain in place and would continue to accommodate egress from the monument.</p> <p>The interior elevators would remain unchanged. The main elevator would continue to serve Levels 1P to 5P; the emergency elevator would continue to serve Levels 1P to 8S. There would continue to be no wheelchair-accessible elevator service between Levels 5P and 6P.</p>	Circulation and Accessibility
		Replace and modify existing main elevator to connect Levels 1P and 5P.
		Install a new supplemental lift for accessibility and emergency evacuation connecting levels 5P and 6P.
		Life Safety Upgrades
		Remove interior stairs within the pedestal and the exterior wood stairs that connect the terreplein to ground level.
		Install two new enclosed and pressurized interior stairs that connect Level 1P to Level 6P.
		Install a new exterior stair that penetrates Fort Wood and brings visitors from the north side of the terreplein to the ground level.
		Install a new exterior stair on the south side of the pedestal that brings visitors from Level 3P down to Level 0P and through the sally port to accommodate egress.
Replace existing emergency elevator to connect Levels 6P to 7S.		
Other Improvements	The existing lighting system would remain unchanged; low levels of illumination would persist throughout the base and pedestal.	Throughout the base and pedestal, upgrade the lighting system to provide better illumination along the stairways and to enable better visibility to the historic Eiffel beams.
	The existing air handling units on Level 7P would remain unchanged and would continue to provide inadequate ventilation to the statue.	Replace air handling units on Level 7P.
	The existing restrooms on Level 1P would remain unchanged.	The restrooms on Level 1P would be made accessible and refurbished as feasible.

CONSTRUCTION

The construction of the proposed actions would require the complete closure of the monument for the duration of construction, estimated to be no longer than 12 continuous months. Construction would not be phased and, although the monument would be closed during that time, Liberty Island would remain open during construction. Construction is scheduled to commence in November 2011, following the 125th anniversary of the opening of the statue on October 28, 2011.

CONSTRUCTION STAGING

Main construction access would be available from the auxiliary work dock on the east side of Liberty Island. NPS has defined the staging areas for this project as the west lawn and on the terreplein, which is outside the primary viewshed for visitors photographing the front of the statue. Figure 2.2 shows the construction staging areas.

Portions of Liberty Island would be subject to temporary closures during construction, including areas of the promenade immediately adjacent to the auxiliary dock. The majority of the promenade would be unobstructed for visitor use.

Construction staging for the proposed actions would also use the interior of the pedestal on Level 2P in the unfinished area of the AMI.

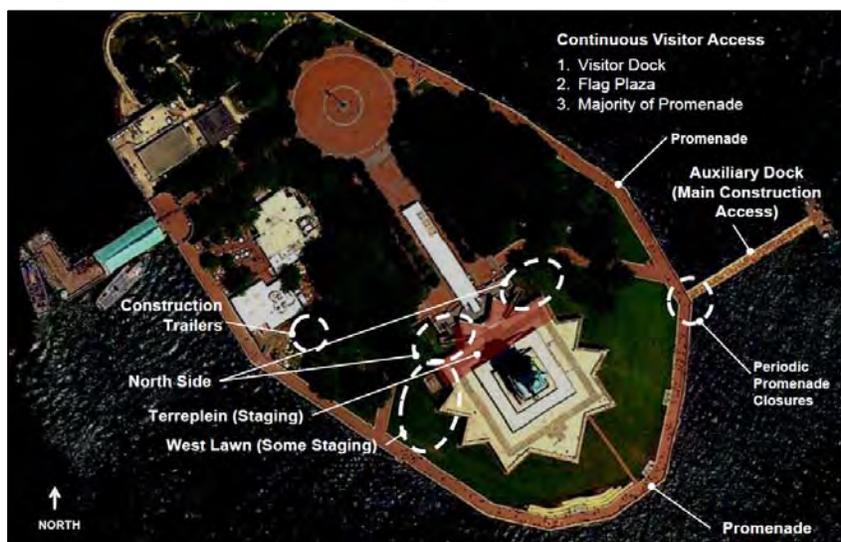
MITIGATION MEASURES INCORPORATED INTO THE PREFERRED ALTERNATIVE

The NPS places a strong emphasis on avoiding, minimizing, and mitigating potentially adverse environmental impacts. To help ensure the protection of natural and cultural resources and the quality of the visitor experience, the following protective measures would be implemented as part of the preferred action alternative. The NPS would implement an appropriate level of monitoring throughout the construction process to help ensure that protective measures are being properly implemented and are achieving their intended results.

VISITOR USE AND EXPERIENCE

1. The majority of Liberty Island would remain open to the public for the duration of construction.
2. Public information would be made available on the Park website and on signs in the Park to inform visitors of the closure of the monument during construction.
3. Construction would not commence until after October 28, 2011—the 125th anniversary of the opening of the statue.

Figure 2.2 – Construction Staging Areas



PUBLIC SAFETY

1. The entire monument would be closed during construction to minimize risk to visitors and staff.
2. Construction workers and employees would follow an approved health and safety plan which incorporates all applicable regulations.
3. Barriers and signs would be used around the monument construction sites to divert the public away from potentially dangerous situations on Liberty Island.
4. Public announcements would be made on the Park website and in the media to alert the public to the closure of the monument.

CULTURAL RESOURCES

Pursuant to the conditions of the Programmatic Agreement (PA) between the NPS and SHPO, and Advisory Council on Historic Preservation (ACHP), as mitigation for any adverse effects to historic properties realized during the project, the NPS will at a minimum:

1. consult with the SHPO on a process for mitigating the adverse effects,
2. if it is determined that Native American archeological resources will be adversely affected, consult with the aforementioned Indian tribes on a process for mitigating the adverse effects,
3. complete standard documentation of construction activities and data recovery as necessary, and
4. commit to continued exploration of long-term and comprehensive possibilities for future interpretation.

ALTERNATIVES CONSIDERED BUT REJECTED

Several alternatives or alternative elements were identified during the design process and during internal and public scoping. Some of these were determined to be unreasonable, or resulted in fewer benefits or greater adverse impacts than similar options included in the analysis, and were therefore not carried forward for analysis in this Environmental Assessment (EA). Justification for eliminating alternatives from further analysis was based on factors relating to:

1. severe impact to Park visitation
2. conflicts with already-established Park uses
3. duplication with other less environmentally damaging alternatives
4. conflict with the statement of purpose and need, or other policy
5. severe impact on environmental or historic resources

CONSTRUCTION OPTIONS TO MAINTAIN CONTINUOUS VISITOR ACCESS TO THE STATUE

The NPS analyzed options to allow visitors to access the statue without using the base of pedestal so that visitation could be maintained during construction. Options included erecting scaffolding structures on the outside of the pedestal to provide access to Level 6P. However, the NPS determined that the cost of the temporary structures exceeded the entire construction budget of the project. In addition, the SHPO concluded that exterior scaffolding would constitute an adverse effect to the statue. Moreover, the visual impacts associated with obscuring the monument would affect a national audience and would create severe adverse impacts. Therefore, these options were dismissed from further analysis.

PHASED AND ACCELERATED CONSTRUCTION

The NPS analyzed phased and accelerated construction options to minimize disruption to visitor use during peak visitation but determined that the mobilization and demobilization of construction activity as well as the required sequence and timing of construction (as dictated by the technical nature of the proposed actions) would provide only a relatively small appreciable advantage over a traditional, single-phased, non-accelerated construction scenario and would be inefficient in terms of cost, staffing, and maintenance. As a result, phased and/or accelerated construction scenarios were dismissed from further analysis.

EXTERIOR STAIRS

The NPS evaluated one alternative option for the new exterior egress stairs on the north side of the terreplein that penetrated the wall of Fort Wood. In consultation with the SHPO, the NPS determined that the disturbance of Fort Wood would constitute an adverse impact to historic resources since Fort Wood is a contributing feature of the historic structure. Therefore, this option was dismissed from further analysis.

The NPS evaluated several variations for the configuration of new exterior egress stairs on the south side of the pedestal. The SHPO determined that, pursuant to the *Secretary of the Interior's Standards*, any new additions or exterior alterations that could compromise the historic character defining features of the monument should be avoided. Rather, the historic character should be preserved and retained. The SHPO indicated that the addition of exterior stairs would constitute an adverse effect on the monument as a historic resource. Therefore, the NPS dismissed these options from further analysis.

INTERIOR STAIRS AND ELEVATORS

The NPS evaluated several options for alternative configurations of the new stairs and elevators. Each configuration was constrained by the limited space of the vertical shaft inside the pedestal and structural constraints (such as the Eiffel beams at Levels 3P and 5P and the concrete counterweight at Level 2P). The various options that were explored included:

1. Leaving the main elevator in its current location and adding new stairs and an emergency elevator
2. Relocating the main elevator to the location of the current emergency elevator
3. Relocating the main elevator to the west side of the monument shaft
4. Relocating the main elevator to the southwest corner of the monument shaft

Of these options, only the west elevator location was carried forward for further analysis because the other options did not optimally fit the new stairs and new emergency elevator.

STAIR AND ELEVATOR FINISHES

The NPS evaluated several options for alternative finishes for the portion of the new enclosed interior stair between Levels 3P and 5P including metal (bronze or stainless steel) and glass. These options were dismissed from consideration because the NPS, in consultation with the SHPO, determined that the metal and glass finishes would be visually inconsistent with the historic character of the monument. In addition, there were concerns associated with the materials since they would be exposed to intense visitor use and would require a high level of maintenance. Therefore, options that utilize extensive glazing or metal cladding were dismissed from further analysis.

ELEVATOR TYPES

The NPS evaluated a range of different types of elevators, all of which had different spatial requirements for the mechanical equipment (motors, hoists, hydraulics, etc.) directly above or below the elevator cab.

The parameters of the required equipment restricted the levels that each elevator could access. To maintain optimal access to as many floors as possible, the NPS dismissed hydraulic and rack and pinion elevator types and opted to utilize an elevator that doesn't require a machine room and is very energy efficient. Elevators that do not require machine rooms are referred to as "machine-room-less" elevators (MRL).

EMERGENCY EGRESS OPTIONS

Options that directed visitors down the interior stairs through the main lobby for emergency egress were dismissed from consideration because using the main lobby as a primary egress path would require extensive modifications for code compliance. The lobby would have to be fully enclosed for adequate pressurization, requiring glass panels to enclose the balcony on Level 1P. In addition, life safety code would have mandated two distinct paths of egress from the lobby which would have required extensive modification of the space on Level 0P, thus possibly affecting the historic fabric.

THE PREFERRED ALTERNATIVE

The preferred alternative is the alternative the NPS believes would best accomplish the project's goals and objectives, as well as purpose and need. In selecting a preferred alternative, the NPS must consider the associated impacts to natural and cultural resources. The NPS chose the action alternative as its preferred alternative because it best meets the objectives of the project and is consistent with NPS management policies, laws, regulations, and plans.

The process by which the NPS identified their preferred alternative and eliminate alternatives and options that would not meet the purpose and need involved two Choosing-By-Advantages and Value Analysis (CBA/VA) Workshops. The first was held during the pre-design stage in January 2010, and the second was held during the schematic design stage in April 2010. The CBA/VAs were conducted by a study team to ensure that all viable project alternatives were considered, the evaluation criteria were sound, the selected solutions were cost effective, an independent opinion was provided, and all proposed project alternatives would satisfy basic project criteria (or factors) that include:

1. Maximize public and staff safety
2. Maximize visitor experience
3. Preserve resources
4. Minimize impacts to Park operations
5. Provide other benefits to NPS

The study team included NPS staff, representatives from the SHPO, and independent consultants specializing in design, fire safety, and life safety/code compliance. Generally, alternatives were evaluated in two stages: an initial, judgment level screening against pre-selected evaluation factors, and a final, more rigorous evaluation using the CBA method. The top alternatives surviving these procedures were identified. The top-ranked of these was further developed, taking some aspects from other alternatives into the recommended solution, and a construction cost estimate was prepared.

The VA process was structured into seven phases to determine a preferred alternative:

1. Information Phase - Understand the question and the context
2. Functional Analysis Phase - Evaluate basic functional needs
3. Creativity Phase - Team develops alternatives to achieving project functions
4. Evaluation Phase - Evaluate alternatives with criteria, including life-cycle costs
5. Development Phase - Develop the best alternatives
6. Recommendation/Presentation Phase - Recommend the best alternatives

7. Implementation Phase - Plan how to make the changes and adjustments

The NPS evaluated qualitative and quantitative advantages of each option across a variety of resources and selected the preferred options that would be carried forward for further analysis. After considering multiple options and dismissing others from consideration based on technical factors, the NPS chose the action alternative as its preferred alternative because it best meets the project criteria and is consistent with NPS management policies, laws, regulations, and plans. These options also offer strategies that best maximize public and staff safety, maximize visitor experience, preserve resources, minimize impacts to Park operations, and provide other benefits to NPS.

VERTICAL CIRCULATION MODIFICATIONS

Implementation of the action alternative would improve the visitor experience and public safety within the monument. The new interior and exterior stairs would enable a code-compliant path of emergency egress for staff and visitors. The addition of a supplemental wheelchair lift from Levels 5P to 6P would enhance overall accessibility by allowing visitors in wheelchairs to access Level 6P, the level at which the structure within the statue is most visible. The replacement of the main and emergency elevators would enhance visitor comfort by increasing the reliability of elevators, which are frequently out of service.

The removal of the wood stairs on the exterior of the pedestal at the terreplein would enhance visual resources and historic resources by removing features that are inconsistent with the historic character of the monument.

The implementation of the action alternative would also enhance the visitor experience of historic elements of the monument. By utilizing the sally port as a point of discharge from the monument, the Park would be able to interpret a historic aspect of Fort Wood that is currently unavailable to visitors. In addition, enhanced lighting would ensure that the historic Eiffel beams are better illuminated and visually accessible to visitors.

FIRE SAFETY SYSTEM MODIFICATIONS

Implementation of the action alternative would improve life safety in the monument and would protect staff and visitors during a fire emergency. The compartmentalization of the monument utilizing enclosed, fire rated stairways and elevator lobby as well as a fire and smoke barrier located between levels 5P and 6P, will contain and isolate a fire at its point of origin. Installation of a smoke exhaust system and enclosed and pressurized fire stairs would effectively allow visitors to safely exit the monument during a fire emergency.

OTHER IMPROVEMENTS

Implementation of enhancements to the lighting system and ventilation system would enhance public safety and increase visitor comfort by providing better illuminated travel paths and better climate control, both of which would reduce the risks associated with trips, falls, and fatigue in the monument. The restrooms on Level 1P, which are heavily used and therefore require periodic improvement, would be made fully accessible and refurbished as feasible.

THE ENVIRONMENTALLY PREFERABLE ALTERNATIVE

The NPS is required to identify the environmentally preferable alternative in its NEPA documents for public review and comment. The NPS, in accordance with the Department of the Interior policies contained in the Departmental Manual (516 DM 4.10) and the CEQ's NEPA's Forty Most Asked Questions, defines the environmentally preferable alternative (or alternatives) as the alternative that best promotes the national environmental policy expressed in NEPA (Section 101[b]) (516 DM 4.10). In their Forty Most Asked Questions, CEQ further clarifies the identification of the environmentally preferable

alternative, stating, “Ordinarily, this means the alternative that causes the least damage to the biological and physical environment; it also means the alternative which best protects, preserves, and enhances historic, cultural, and natural resources” (CEQ n.d.).

Based on the analysis of environmental consequences of each alternative, the NPS determined that the action alternative is the environmentally preferable alternative. Implementation of the action alternative has negligible effects on natural resources in the project area and would best protect public safety while enhancing visitor use and experience and preserving the historic resources in the monument.

HOW THE ALTERNATIVES MEET THE OBJECTIVES

The project objectives, enumerated in “Chapter 1: Purpose and Need,” must be achieved to a large degree for the action to be considered a success. The alternatives and options selected for detailed analysis must resolve the purpose of and need for action and must meet all objectives either minimally, partially, or fully.

Table 2.2 – How the Alternatives Meet the Project Objectives

Objective	No Action Alternative	Action Alternative
<p>Improve public safety in the monument by meeting life safety and accessibility codes</p>	<p>Does not meet this objective.</p> <p>Currently, the fire safety system lacks a proper fire compartmentalization and smoke exhaust system in the monument that would contain and isolate smoke and fire at the point of origin.</p> <p>The existing dimensions of the interior stairs are narrower and steeper than what is allowed by code.</p> <p>Visitors in wheelchairs can currently only access up to Level 5P in the monument.</p>	<p>Partially meets this objective.</p> <p>While the pedestal and base will be compliant, the statue itself cannot.</p> <p>A new enclosed and pressurized interior stair and new exterior stairs would create a safe and compliant path of emergency egress for visitors and staff.</p> <p>New open interior stairs in the pedestal would be wider and less steep to satisfy code compliance.</p> <p>A new elevator between Levels 5P and 6P would enable universal accessibility to Level 6P. While the pedestal and base will be compliant, the statue itself cannot.</p> <p>The installation of fire and smoke barriers and a smoke exhaust system as well as enhancements to the ventilation, pressurization, and sprinkler systems would dramatically reduce risks to visitors and staff during fire emergencies.</p> <p>New lighting fixtures and an enhanced climate control system and ventilation would increase visitor comfort and safety, reducing the risks associated with trips, falls, and fatigue in the monument.</p>
<p>Provide visitors and staff with efficient emergency egress from the monument</p>	<p>Does not meet this objective.</p> <p>Currently, the fire safety system is inadequate and is not code compliant (pursuant to NFPA 13). The system lacks essential components that would provide proper fire compartmentalization and smoke exhaust in the monument and ensure a safe means of egress for visitors during a fire emergency.</p> <p>The current point of discharge for visitors at Level 3P only has one path of egress from the terreplein to ground level instead of the two independent paths that are separated by a minimum distance required by code.</p>	<p>Fully meets this objective.</p> <p>A new enclosed and pressurized interior stair and new exterior stairs would create a safe and compliant path of emergency egress for visitors and staff.</p> <p>The installation of fire and smoke barriers and a smoke exhaust system as well as enhancements to the ventilation, pressurization, and sprinkler systems would improve emergency egress in the monument.</p>

Table 2.2 – How the Alternatives Meet the Project Objectives

Objective	No Action Alternative	Action Alternative
<p>Minimize disruption to and enhance visitor use and experience in the monument</p>	<p>Fully meets this objective.</p> <p>The no action alternative would not result in any disruption to current visitor use and experience.</p>	<p>Partially meets this objective.</p> <p>During construction, Liberty Island would remain open for visitation, but the monument would be closed for up to 12 months.</p> <p>The closure of the monument would diminish visitor experience and would eliminate the possibility of visiting the Park’s primary resource for a period of time. However, the extent of construction would be contained within the monument, minimizing disruption to visitor experience elsewhere on Liberty Island. In addition, widespread notification of the closure of the monument and expanded visitor opportunities at Ellis Island would minimize disruption to visitor use experience.</p>
<p>Preserve the integrity of the cultural resources on Liberty Island</p>	<p>Fully meets this objective.</p> <p>Current NPS management practices are intended to preserve the historic resources in the monument for the enjoyment of visitors pursuant to Director’s Order 28 and NPS management policies.</p>	<p>Fully meets this objective.</p> <p>By implementing fire safety upgrades, the NPS would achieve compliance with life safety and fire safety codes to the maximum extent possible without compromising the historic fabric.</p> <p>Modifications to the interior stairs and lighting system would ensure that the historic components of the monument, such as the Eiffel beams and the sally port (the original entrance to Fort Wood), are able to be better appreciated by all visitors.</p>

SUMMARY OF IMPACTS

The table on the following pages provides a summary of environmental consequences for each resource area analyzed in “Chapter 4: Environmental Consequences.”

Table 2.3 – Summary of Impacts (Environmental Consequences)

Impact Topic	No Action Alternative	Action Alternative
<p>Visitor Use and Experience</p>	<p>Continuation of the current conditions under the no action alternative would compromise visitor use and experience, but not to a degree that appreciably limits critical features of the Park for a large number of visitors. Due to extensive notification of the strenuous climb, cramped conditions, and lack of full accessibility within the monument, visitor expectation is managed and satisfaction is stable. Impacts associated with other projects in the cumulative area of analysis would be long-term and beneficial, with short-term minor adverse effects during construction.</p> <p>Cumulative impacts: Impacts from other projects would be long-term and beneficial; there would be short-term minor adverse cumulative effects resulting from other construction projects in the study area. The cumulative impacts would yield short-term minor adverse impacts during construction but a net long-term beneficial impact. When combined with the long-term minor adverse impacts of the no action alternative, there would be long-term negligible adverse cumulative impacts.</p>	<p>The enhancements to the fire safety system would have no effect on visitor use or experience following construction since they would not be perceptible or visible to the public. The enhanced climate control, lighting system, and refurbished restrooms would improve visitor comfort and accessibility, creating a long-term beneficial impact on visitor use and experience.</p> <p>The proposed improvements to the vertical circulation would provide visitors with a new opportunity to appreciate historic components of the monument that are currently unavailable to them, expanding accessibility and increasing the reliability of the elevators, thus creating beneficial impacts on visitor use. On the exterior of the pedestal, the design of the new stairs would be refined pursuant to the conditions of the PA to ensure visual consistency with the aesthetic of the existing historic features so long-term adverse impacts would be minor.</p> <p>There would be short-term minor adverse impacts during construction resulting from the closure of the monument and portions of Liberty Island for up to 12 months.</p> <p>Cumulative impacts: Overall, cumulative impacts on visitor use and experience would be long-term and beneficial, with short-term minor adverse impacts during construction.</p>

Impact Topic	No Action Alternative	Action Alternative
<p>Public Safety</p>	<p>Under the no action alternative, there would be long-term minor adverse impacts on public safety due to the possibilities of accidents or injuries resulting from inefficient lighting and climate control systems.</p> <p>There would be long-term moderate adverse impacts to public safety resulting from the continued reliance on the existing fire safety system.</p> <p>Cumulative impacts: When combined with the long-term adverse impacts of the no action alternative that range from moderate to minor, there would be long-term adverse moderate cumulative impacts to public safety.</p>	<p>The improvements to the fire safety system and the vertical circulation modifications would create long-term beneficial impacts to public safety by introducing new code-compliant features that would enhance visitor comfort, emergency response, and safe egress from the monument, dramatically reducing risks to visitors and staff.</p> <p>New lighting fixtures and an enhanced climate control system and ventilation would increase visitor comfort and safety, reducing the risks associated with trips, falls, and fatigue in the monument.</p> <p>During construction, risks to public safety would be dramatically reduced since the monument would be closed; therefore, there would be short-term negligible adverse impacts to public safety.</p> <p>Cumulative impacts: Impacts from other projects would be short-term minor and adverse during construction but beneficial in the long-term. When combined with the long-term beneficial impacts resulting from implementation of the action alternative, there would be long-term beneficial cumulative impacts to public safety.</p>
<p>Historic Structures</p>	<p>Continuation of the current conditions under the no action alternative would compromise the continued preservation of the monument, but not to a degree that appreciably compromises the historic features associated with the monument.</p> <p>Impacts from cumulative projects would include long-term beneficial impacts on the overall historic context of the monument, with negligible impacts on the historic fabric of the monument due to structural improvements..</p> <p>The no action alternative would not result in impairment of historic structures or districts because it would not would change any character-defining feature(s) of the structure(s) and would not include any structural modifications; it would not diminish the integrity of the historic property or compromise the eligibility of the structure(s).</p> <p>Cumulative impacts: When combined with the long-term beneficial impacts of the no action alternative, there would be cumulative long-term negligible impacts.</p>	<p>The improvements to the fire safety system and vertical circulation modifications in the monument would create long-term beneficial impacts to historic structures and features at Liberty Island. Most notably, the upgraded fire safety system would enhance the protection and preservation of the monument. Further design refinement would be undertaken pursuant to the conditions of the Programmatic Agreement to ensure consistency with the existing historic features.</p> <p>Construction activities will be undertaken in accordance with the Secretary of the Interior's Standards for the Treatment of Historic Properties and would limit and ideally not cause new impacts to historic features and therefore, result in negligible short-term adverse effects to historic fabric or structures.</p> <p>The action alternative would not result in impairment of historic structures or districts because the alternative includes only limited physical disturbance to the non-historic fabric of the monument. All improvements would be both respectful of the existing historic features and in keeping with the Secretary of the Interior's Standard for the Treatment of Historic Properties. The action alternative would not change any character-defining feature(s) of the structure(s) and would not diminish the integrity of the historic property or compromise the eligibility of the structure(s).</p> <p>Cumulative impacts: The combined impact of the beneficial impacts of the action alternative and impacts from other projects would result in overall long-term cumulative beneficial impacts to historic structures and features.</p>

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CHAPTER 3: AFFECTED ENVIRONMENT

This chapter of the Environmental Assessment (EA) describes existing environmental conditions in the areas potentially affected by the proposed actions. These following resource areas are described: visitor use and experience, public safety, and historic structures. Potential impacts are discussed in “Chapter 4: Environmental Consequences” in the same order.

VISITOR USE AND EXPERIENCE

As a universal icon of freedom and democracy, the Statue of Liberty National Monument has become a popular national tourist destination, attracting several million visitors annually. As a result, the Park places great value on visitor use and experience.

Visitor use and experience at the Park encompasses the way in which people use, participate in, and perceive the facilities and amenities within Ellis Island and Liberty Island.

ELLIS ISLAND

Ellis Island, located approximately ½ mile north of Liberty Island in New York Harbor (see Figure 1.1) opened in 1892 and served as the nation’s eastern seaboard federal immigration station until 1954. Following a period of abandonment after 1954, the main building was restored and opened as a museum in 1990. In addition to the museum, which is a tourist destination, Ellis Island also includes the American Family Immigration History Center, which attracts researchers in addition to tourists. The total visitation for Ellis Island was 2,005,857 people in 2009 (NPS 2010).

Ellis Island is approximately ¼ mile east of New Jersey’s Liberty State Park, a 1,122-acre area with approximately 300 acres developed for public recreation with areas such as a marina, waterfront restaurants, and trails (www.libertystatepark.com). The boundary of the park includes the Liberty Science Center, Liberty Walk, and Liberation Monument.

Ellis Island and Liberty Island are accessed via ferry, which is managed by Statue Cruises, a National Park Service (NPS) concessionaire. Ferries arrive and depart from Battery Park in Lower Manhattan and Liberty State Park in Jersey City, New Jersey, approximately 30 to 40 minutes apart beginning at either 8:30 a.m. or 9:00 a.m. depending on the time of year, until 5:00 p.m. Both ferry lines stop at both Ellis Island and Liberty Island and many visitors stop at both islands on the same trip.

LIBERTY ISLAND

Visitor use and experience at Liberty Island is affected by the ability to enjoy multiple amenities such as the flagpole plaza, NPS concession buildings, the promenade, and the monument (see Figure 3.1).

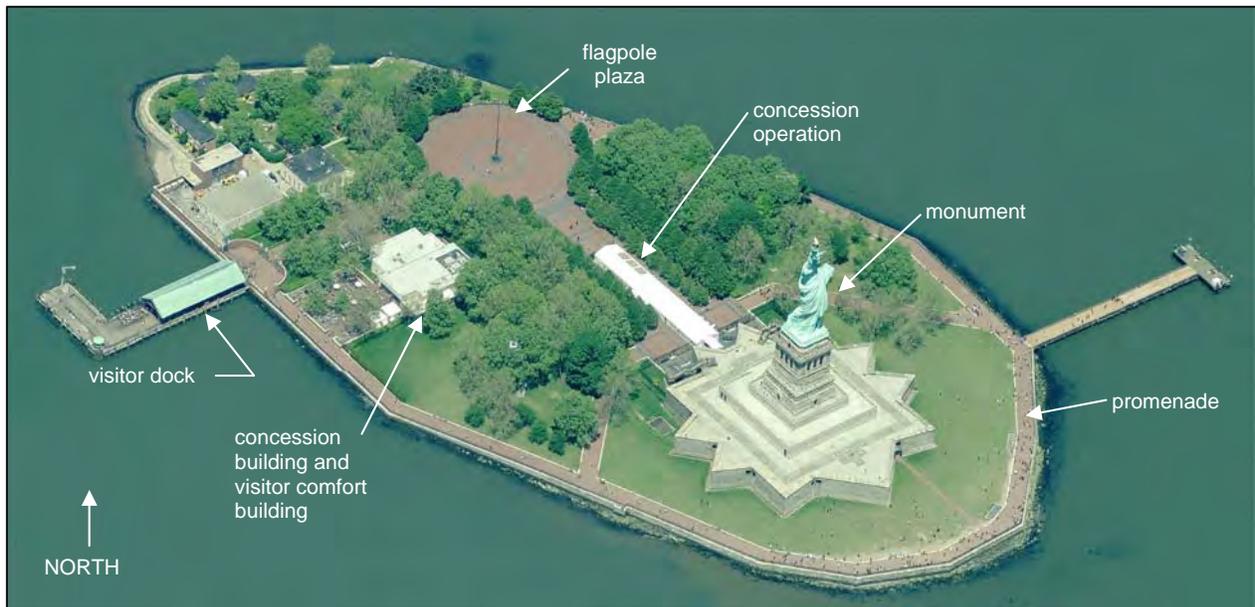
Flagpole Plaza

The flagpole plaza is located at the intersection of the two main axes on Liberty Island that connect the visitor dock and the mall leading to the monument. It is the central public gathering spot for tours and is also occasionally used for special events.

NPS Concessions

The concessioner’s retail operation formerly occupied a long white tent on the Mall leading to the entrance of the monument. This tent has recently been removed and replaced with a new Leadership in Energy & Environmental Design (LEED) rated retail pavilion with visitor restrooms adjacent to the food and beverage building on the west side of Liberty Island .

Figure 3.1 – Amenities on Liberty Island



Promenade

The promenade encircles the majority of the eastern perimeter of Liberty Island between the visitor dock and the flagpole plaza. It is fully accessible and open for visitor use and enables some of the best views of the monument (see Figure 3.2) and the adjacent skylines.

The Monument

Views of the monument are an important aspect of visitor use and experience and have been documented extensively from numerous locations in New York, New Jersey, and New York Harbor. Glimpses of the statue can be seen from other locations further out, depending on various factors such as topography and air quality. Historically, the most poignant views of the statue were from New York Harbor, where millions of immigrants passed by her on their entry into the United States. The ferry to Liberty Island allows visitors to capture views of the statue and Liberty Island from the water (see Figure 3.3).

Figure 3.2 – View of the Monument from the Promenade



The monument is one of the most popular features of the Park. Yet, of the several million annual visitors to the Park, as many as 3,000 visitors a day can be granted access to the pedestal through passes administered by a concessionaire that manages the ticket reservation system. Only 240 visitors may have access to the statue's crown on any given day (NPS 2010). The busiest months for visitation are April through July, which coincides with increases in tourism for New York City.

At the monument, visitors currently enter the north side into the main lobby on Level 0P. From Level 0P, visitors can use either an elevator or stair to access Level 1P, which has a balcony overlooking the main lobby, restrooms, and access to the main elevator for the pedestal (which connects Levels 1P and 5P). Visitors can use stairs or the elevator to access Level 1P, where the Statue of Liberty Exhibit is located, and Level 3P. Level 3P and Level 6P are connected by two sets of narrow stairs. Level 6P and 7P are also connected by two sets of narrow stairs, but visitors cannot ascend to 7P without a ticket. Each stair is maintained as single directional, one for ascent and one for descent. Currently, there is no elevator service to accommodate wheelchair accessibility above Level 5P.

To access the statue from Level 7P, visitors can use the set of two double helical stairs to ascend and descend the crown.

Visitors are currently discharged from the monument at Level 3P where they use two sets of exterior stairs to descend to the terreplein. From there, they must climb a wooden staircase that crosses over the walls of Fort Wood down to the ground level¹.

Features within the Monument

The base and pedestal includes portions of the historic Fort Wood as well as the original structural pedestal walls. The entry lobby of the monument contains the original 1886 torch and elevators to access Level 1P where the Statue of Liberty Exhibit is located. This museum contains full-scale replicas of portions of the statue as well as detailed information about the fabrication and construction of portions of the pedestal and statue.

Since July 4, 2009, visitors have been able to access the crown. However, ascending to the crown requires climbing a sequence of stairs within the monument, although two separate elevators are available for visitor use between Levels 0P and 1P and between Levels 1P and 5P. To ascend the statue, visitors must use the set of two double helical stairs that are only 19 inches wide with headroom that is just over six

Figure 3.3 – Historic View of the Monument from New York Harbor



Source: New York Public Library's Digital Library

¹ Under existing conditions, visitors do not exit the monument through the sally port; it is part of the base that is currently not open to the public.

feet. In general, the climb to the crown is undertaken in cramped conditions with elevated temperatures in warmer months. The NPS imposes a four-foot-height minimum for persons climbing to the crown.

Panoramic views looking toward New York and New Jersey from the observation deck on Level 6P as well as from the crown observation platform are important features within the monument (see Figure 3.4).

There are no exterior windows inside the pedestal, so all illumination is provided via lighting fixtures which are generally at low levels of intensity. Other than the entrance lobby and museum, the main visual elements in the pedestal include a network of stairs that ascend to the observation deck on Level 6P. The stairs in the monument are not currently enclosed and wrap around the interior perimeter of the pedestal. Visual access to the historic features of the pedestal, including the Eiffel beams, is currently available at Levels 3P, 5P, and 6P (see Figure 3.5).

In the statue, the copper cladding and historic structural iron framework are visible throughout (See Figure 3.6). A set of two double helical stairs provides access to the crown from the center of the statue; in 2009, new stainless steel handrails were added.

Figure 3.4 – View from Crown Observation Platform Looking Northeast toward Lower Manhattan

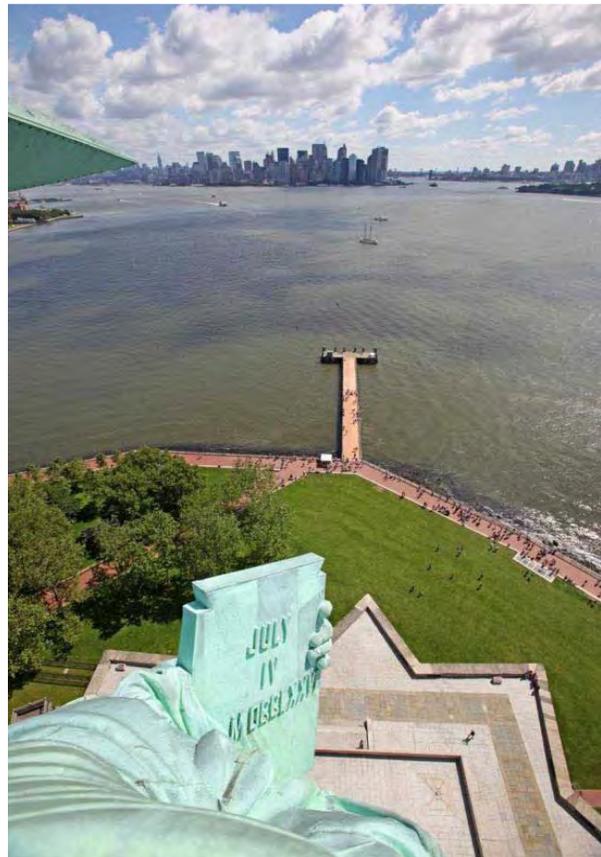


Figure 3.5 – View of the Historic Eiffel Beams



Figure 3.6 – View of Historic Structural Framework Inside statue



PUBLIC SAFETY

The NPS is committed to providing high quality opportunities for visitors and employees to enjoy Parks in a safe and healthy environment. Furthermore, the NPS strives to protect human life and provide for injury-free visits. Safety applies to both Park visitors and Park employees.

VISITOR SAFETY

Ensuring visitor safety at the Park is a multi-step process managed by the NPS and United States Park Police (USPP) and consists of security screening, public safety within the monument, and management of emergency response.

Security Screening. Prior to boarding the ferries in either Battery Park or Liberty State Park, each visitor is subject to an initial security screening with metal detectors and x-ray machines. The wait time at Battery City is approximately twice that at Liberty State Park, despite roughly double the equipment and staff at the Battery Park location. This difference in wait time reflects the proportionately larger number of visitors who depart from Lower Manhattan.

For visitors stopping at Ellis Island, there is no additional security screening. For visitors to Liberty Island with tickets into the monument, a secondary level of security screening is implemented with metal detectors, x-ray machines, and an air puffer to test if explosives residues are present. Visitors to the monument and crown must obtain tickets in advance of their visit. Visitor names are printed on the tickets at the time of purchase and they must furnish proof of identification that matches the name on the ticket prior to entering the monument. No backpacks, strollers, luggage, or parcels are allowed inside the monument due to security concerns.

Public Safety inside the Monument. Once inside the monument, access to the statue and crown is provided by 354 stairs. There are two stairwells that are each maintained as single directional at all times. The stairs within the statue are only 19 inches wide with just over six feet of headroom; the conditions are cramped and can get warm during the summer months. For safety considerations, groups of no more than 10 people visit the crown observation platform at a time.

The NPS website advises visitors that the statue is not air conditioned and warns that interior temperatures can be 20 degrees higher than the outside; on hot days visitors should drink water at least 30 minutes prior to the climb. The website further states:

“The climb is strenuous and not without risk, and the National Park Service recommends that crown visitors have no significant physical or mental conditions that would impair their ability to complete it, including, but not limited to: heart and respiratory conditions, mobility impairments, claustrophobia (fear of confined spaces), acrophobia (fear of heights) or vertigo (dizziness)” (NPS 2010).

Most of the visitor incidents within the monument are related to the stairs and include exhaustion, fatigue, and/or tripping and falling.

Emergency Response. The NPS and USPP have management plans for emergency response, whether the threat is natural or manmade. In the event of fire, the alarm system—which consists of voice annunciation warnings, emergency lighting, and strobe lighting—is activated; the sprinkler system is activated by hot gases from a fire. During a fire emergency, NPS management procedures stipulate that the two NPS rangers in the crown observation platform each descend separate staircases to evacuate members of the public.

For visitors who require emergency assistance inside the statue or pedestal, there is a small emergency elevator that connects Levels 1P and 8S. This elevator can only accommodate two

persons upright, so a stretcher must be aligned accordingly. Persons requiring emergency attention in the crown observation platform must be carried down to Level 8S.

EMPLOYEE SAFETY AND HEALTH

Park staff personnel are subject to the same tripping hazards that pertain to the general public, but they are also subject to maintenance hazards which, with limited frequency, produces minor injuries related to manual work and heavy material handling.

ACCESSIBILITY

The majority of features of the Statue of Liberty National Monument—including the ferries, main buildings of Ellis Island, and the grounds of Liberty Island—are compliant with the Architectural Barriers Act Accessibility Standard (ABAAS) standards. However, portions of the monument are not fully compliant. Visitors who require the use of a wheelchair can currently enter the pedestal and access the lobby, museum, and lower promenade including Fort Wood from Levels 0P to 1P. The main elevator extends to Level 5P, but access to Level 6P, which includes the pedestal observatory platform, is currently not ABAAS compliant. There is no wheelchair access above Level 5P and no wheelchair access inside the statue.

The layout of the restrooms on Level 1P does not make it fully accessible. However, there are fully accessible restrooms on Liberty Island in the concession and visitor comfort building adjacent to the visitor dock.

CULTURAL RESOURCES

A historic property is any “prehistoric or historic district, site, building, structure, or object included in or eligible for inclusion in the National Register of Historic Places” (36 CFR 800.16). Eligibility for inclusion in the National Register of Historic Places (NRHP) is established according to the official Criteria of Evaluation (36 CFR 60.4) issued by the Department of the Interior. The criteria relate to the following:

The quality of significance in American history, architecture, archeology, engineering, and culture is present in districts, sites, buildings, structures, and objects that possess integrity of location, design, setting, materials, workmanship, feeling, and association and

1. that are associated with events that have made a significant contribution to the broad patterns of our history; or
2. that are associated with the lives of persons significant in our past; or
3. that embody the distinctive characteristics of a type, period, or method of construction, or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction; or
4. that have yielded, or may be likely to yield, information important in prehistory or history.

The NPS has a unique stewardship role in the management of its historic properties, reflected in its own regulations and policies. In these policies, the NPS categorizes cultural resources by the following categories: archeological resources, cultural landscapes, historic districts and structures, museum objects, and ethnographic resources.

HISTORIC PROPERTIES

This section addresses historic properties present that are listed on the NRHP, have been determined eligible for inclusion on the NRHP, or that may be eligible for the NRHP; these properties include buildings, structures, sites, objects, or historic districts. Because the monument has been a focus of preservation initiatives from the initial passage of the NHPA in 1966 and before, the official documentation of its historic resources has been accomplished in a series of studies that sometimes overlap and vary in approach.

The project has the potential to directly or indirectly affect one historic property, the Statue of Liberty National Monument at Liberty Island. Within the APE, the Statue of Liberty National Monument consists of the monument, buildings, structures, objects, landscape features, and archeological sites located on Liberty Island.

THE STATUE OF LIBERTY NATIONAL MONUMENT (THE MONUMENT)

The Statue of Liberty was designated a national monument in 1924, listed on the NRHP in 1966, and nominated as a World Heritage Site in 1984. Located on the 12-acre Liberty Island, the Statue of Liberty is a historic structure that includes the three components of the monument—the Statue of Liberty of Liberty Enlightening the World (statue), the pedestal, and the base and Fort Wood—as well as contributing and non-contributing buildings, structures, objects, landscape features, and archeological sites. The monument is universally significant for both its physical and symbolic characteristics (NPS 1980). Overlooking New York Harbor, “the statue ‘Liberty Enlightening the World’ is one of the world’s most recognized icons. A gift from the people of France during the American Centennial, she commemorates the abolition of slavery, democratic government, and the friendship between the two

nations that was established during the American Revolution. She endures as a highly potent symbol—inspiring contemplation, debate, and protest—of such ideas as liberty, freedom for all people, human rights, democracy, and opportunity. Her design—a technological achievement of its time—continues to represent a bridge between art and engineering” (NPS Internal Draft Foundation Document 2009).

The monument is significant in the areas of art, architecture, engineering, social history, politics and government, and military history (NPS 2006). The period of significance extends from 1800 to 1890 and is currently being reevaluated to extend into the 1950s. Additionally, in 1985, the statue was designated as an International Civil Engineering Landmark by the American Society of Civil Engineers (ASCE) and the Société des Ingénieurs et Scientifiques de France (ASCE 2010). Those resources that contribute to the statue and may be directly impacted by the project have been described individually.

Liberty Island is considered a developed area with landscape features that include a landscaped mall, trees and hedges, and broad, concrete, slate and asphalt walks. Although listed in the NPS Cultural Landscape Inventory, the landscape features have not been determined eligible and are undergoing a significance determination. The public area encompasses approximately two-thirds of the southern portion of the island and includes the area around the monument. A walk encircles the monument and extends around the perimeter of the public area. The initial improvements date from the mid-1950s and removal of the World War II military structures. In 1986, the landscape was extensively redesigned (NPS 1980).

The 1981 National Register of Historic Places Inventory - Nomination Form defined exclusions as those buildings and structures of more recent construction that do not relate to the significance of the monument and its designation. However, status of the previously non-contributing administration and concession buildings have been re-evaluated and determined eligible as contributing elements to the Statue of Liberty National Monument. The living quarters for Park personnel and docking facilities were previously excluded as non-contributing buildings and structures. Likewise, the remodeled administrative and exhibit areas in the base do not contribute to the significance of the Statue of Liberty National Monument, such as “the entrance, office, storage, and National Park Service exhibit areas, and the American Museum of Immigration.” A reevaluation of the contributing, associated features on Liberty Island is currently in progress; an assessment of the character defining features of the monument will be updated as part of the Historic Structure Report, which is ongoing (NPS 1980; NYSOPRHP 2010).

The addition of the AMI in the base of the monument—begun in 1962 was completed in 1972, and later closed when Ellis Island Immigration Museum opened in 1990—resulted in several structural modifications to the base; the entrance to the pedestal through Fort Wood was remodeled, and three levels around the base of the pedestal were added. Heating and cooling plants, offices, and staff work rooms are part of Fort Wood and the pedestal.

THE STATUE OF LIBERTY ENLIGHTENING THE WORLD (THE STATUE)

The 151-foot-tall Statue of Liberty Enlightening the World is the primary historic resource on Liberty Island. The statue was a gift from the people of France to the people of the United States. The concept of a statue to commemorate democracy in America was the inspiration of Edouard Rene de Laboulaye, a French author and professor. The statue was intended to commemorate America’s one hundredth anniversary of independence in 1876. French sculptor, Frederic-August Bartholdi was commissioned to design the statue. On a trip to the United States, Bartholdi saw Bedloe’s Island from his ship as it sailed through the harbor. Realizing that the site would provide a prominent location for continual display of the statue, he chose the island to exhibit France’s gift.

Bartholdi who had trained in art, sculpture, and architecture, fashioned a goddess holding the torch of liberty in the style of Greco-Roman art. He titled his work, *Statue of Liberty Enlightening the World*, and molded the statue out of thin sheets of copper, 3/32 of an inch thick. The statue was constructed in France between 1875 and 1884, disassembled, and shipped to the United States, where it was reassembled in four

months and dedicated in 1886. Bartholdi was known for his large-scale work. At the time of its construction, the statue was the tallest figure ever to be sculpted by man and is the largest piece of copper statuary. Its colossal proportions and the construction techniques utilized by Frederic-August Bartholdi have made the statue significant in the area of art history (NPS 1980; NPS 2009).

Engineer Alexandre-Gustave Eiffel was commissioned to design the steel framework that supports the statue. Eiffel designed a skeletal support system with a rigid central core and a skin-supporting iron armature, described as resembling a “lady’s dress form.” In addition, “The central core—surrounded by a secondary, light angle-iron frame—has, as its elements, four iron girders that form a pylon.” Eiffel’s structural system with “its rigid frame supporting a light exterior skin represents an early example of curtain wall construction” (Cliver 1986).

The character-defining features of the statue include, but are not limited to the copper shell or cladding, Eiffel’s steel framework structural system including the Eiffel beams, the crown and crown observation deck, and the torch.

THE PEDESTAL

Construction the statue was the result of the collaborative effort between the two countries: France for its contribution of the statue and the United States for construction of the pedestal. The pedestal was designed by Richard Morris Hunt, “the most celebrated American architect of the late nineteenth century” (Rybczynski 2001). The pedestal is a tapered stone mass that rises 89 feet above the foundation. Constructed of concrete faced with coursed granite, the pedestal has six levels with an observation deck surrounding the Level 6P. Two opposing entrances lead to the observation deck. The levels are connected by a series of stairs installed in 1986 during restoration of the statue. A section of the original stairs remains as a historic feature. Provisions for an elevator were part of the original design of the pedestal; however, the first elevator was not installed until 1909 (NPS 2009; NPS 1980).

The siting and relation of the pedestal to the statue are significant character-defining features. Other character-defining features include its granite exterior walls, the balcony, openings to the balcony and parapet surrounding Level P6, and the remaining segment of the historic stairway at Level P6.

THE BASE AND FORT WOOD

The base of the monument is formed by a 65-foot high foundation constructed within the walls of Fort Wood (Levine and Story 1961). The 11-point, star-shaped fort was constructed in 1811 as part of the defenses of New York Harbor. In 1844 the fort was rebuilt; the renovations included a new granite face introduced to the scarp, musketry slots, and deep parapet coping. The stone walls at Fort Wood average 24 feet in height and are roughly 30 feet thick (NPS 1980).

The fort is one of New York’s harbor fortifications designed by Colonel Jonathan Williams. Apart from its place as a component of the base of the monument, Fort Wood is historically significant in its own right “as one of the outstanding examples of the non-bastioned star forts of the post-Revolutionary period.” Fort Wood retains sufficient integrity to convey its military architectural significance (NPS 1980; JGWA 2009).

The character-defining features are categorized as the site, the plan, the proportion, the construction materials, the openings, and the interior elements; these have been adapted from the Fort Wood Historic Structure Report. The relationship of the fort to the island is a significant character-defining feature. The fort was positioned at the south end of Bedloe’s Island to face the harbor. As the site for the statue, the location of the fort proved ideal; the statue was positioned precisely within its walls overlooking the harbor and the southern tip of Manhattan. The asymmetrical, 11-point, star-shaped plan of the fort is significant as a reflection of its original use and as the setting of the statue. The Pedestal Committee chose

the fort for the location of the statue because its star shape was “emblematic of our constellation of states and nationality.” The monumental proportion of the fort, the battered, rock-cut ashlar granite scarp walls, the machicolations at each re-entrant angle except at the north entrance, are significant character-defining features. The size of the horizontal openings and the angle and smooth finish of the stone are contributing elements. The location of the sally port entrance at the southeast and the angle of the corresponding interior tunnel, stone walls, and barrel-vaulted ceilings are character-defining elements. The metal frame and doors at the opening of the sally port are non-contributing elements. The main entrance, as it currently appears, is the result of improvements in 1986. The granite quoins surrounding the opening, the granite slab lintel, bronze doors, and narrow slot windows flanking the entrance are non-contributing elements. All of the exterior mortar has been replaced and is non-contributing (JGWA 2009).

On the interior, the stepped concrete foundation of the statue pedestal has been identified as the most important feature within the museum. The imprints of the wood forms in the concrete establish a visible connection with the construction process of the pedestal. The sally port (listed above), the angled alignment, brick vault ceiling, and ashlar stone walls contribute to the understanding of the history of the fort as the base of the statue (JGWA 2009).

The 1986 restoration of the statue and other, more recent, rehabilitation projects such as installation of handrails on the set of two double helical stairs that lead to the crown observation platform, and rehabilitation of several doors for life safety code compliance contribute to the continued preservation of the monument.

CHAPTER 4: ENVIRONMENTAL CONSEQUENCES

This “Environmental Consequences” chapter analyzes both beneficial and adverse impacts that would result from implementing any of the alternatives considered in this Environmental Assessment (EA) and Assessment of Effect (AoE). This chapter also includes definitions of impact thresholds (e.g., negligible, minor, moderate, and major), methods used to analyze impacts, and the analysis methods used for determining cumulative impacts. The topics presented in this chapter, and the organization of the topics, correspond to the discussions contained in “Chapter 3: Affected Environment.”

GENERAL METHODOLOGY FOR ASSESSING IMPACTS

Potential impacts of all alternatives are described in terms of type (beneficial or adverse); context; duration (short- or long-term); and intensity (negligible, minor, moderate, major). Definitions of these descriptors include:

Beneficial: A positive change in the condition or appearance of the resource or a change that moves the resource toward a desired condition.

Adverse: A change that declines, degrades, and/or moves the resource away from a desired condition or detracts from its appearance or condition.

Context: The affected environment within which an impact would occur, such as local, park-wide, regional, global, affected interests, society as whole, or any combination of these. Context is variable and depends on the circumstances involved with each impact topic. As such, the impact analysis determines the context, not vice versa.

Duration: The duration of the impact is described as short-term or long-term. Duration is variable with each impact topic; therefore, definitions related to each impact topic are provided in the specific impact analysis narrative.

Intensity: Because definitions of impact intensity (negligible, minor, moderate, and major) vary by impact topic, intensity definitions are provided separately for each impact topic analyzed.

IMPACTS TO CULTURAL RESOURCES AND COMPLIANCE WITH SECTION 106 OF THE NATIONAL HISTORIC PRESERVATION ACT

In this environmental assessment/assessment of effect, impacts to cultural resources are described in terms of type, context, duration, and intensity, as noted above, which is consistent with the Council on Environmental Quality regulations that implement the National Environmental Policy Act (NEPA). These impact analyses are also intended to comply with the requirements of National Historic Preservation Act (NHPA) Section 106. In accordance with the Advisory Council on Historic Preservation’s (ACHP) regulations implementing Section 106 of the NHPA (36 CFR Part 800, Protection of Historic Properties), impacts to archeological resources and the cultural landscape were identified and evaluated by (1) determining the area of potential effects; (2) identifying cultural resources present in the area of potential effects that were either listed in or eligible to be listed in the National Register of Historic Places (NRHP); (3) applying the criteria of adverse effect to affected cultural resources either listed in or eligible to be listed in the National Register; and (4) considering ways to avoid, minimize, or mitigate adverse effects.

Under the ACHP’s regulations, a determination of either adverse effect or no adverse effect must be made for affected National Register-eligible cultural resources. An adverse effect occurs whenever an impact alters, directly or indirectly, any characteristic of a cultural resource that qualifies it for inclusion in the National Register (e.g., diminishing the integrity of the resource’s location, design, setting, materials, workmanship, feeling, or association). Adverse effects also include reasonably foreseeable effects caused

by the preferred alternative that would occur later in time, be farther removed in distance, or be cumulative (36 CFR Part 800.5, Assessment of Adverse Effects). A determination of no adverse effect means there is an effect, but the effect would not diminish in any way the characteristics of the cultural resource that qualify it for inclusion in the National Register.

CEQ regulations and the NPS Conservation Planning, Environmental Impact Analysis and Decision making (DO-12) call for a discussion of the appropriateness of mitigation, as well as an analysis of how effective the mitigation would be in reducing the intensity of a potential impact (e.g., reducing the intensity of an impact from major to moderate or minor). Any resultant reduction in intensity of impact due to mitigation, however, is an estimate of the effectiveness of mitigation under NEPA only.

It does not suggest that the level of effect as defined by Section 106 is similarly reduced. Although adverse effects under Section 106 may be mitigated, the effect remains adverse. A Section 106 summary is included at the end of this chapter. The Section 106 summary is intended to meet the requirements of Section 106 and is an assessment of the effect of the undertaking (implementation of the alternative) on historic structures, based upon the criterion of effect and criteria of adverse effect found in the ACHP's regulations.

CUMULATIVE IMPACTS

NEPA regulations require an assessment of cumulative effects in the decision making process for federal projects. Cumulative effects are defined as “the impact on the environment that results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (federal or nonfederal) or person undertakes such other actions” (40 CFR 1508.7). Cumulative effects are considered for all alternatives, including the no action alternative.

The analysis of cumulative effects was accomplished using four steps:

1. Fully identify resources affected by any of the alternatives (i.e., the impact topics).
2. Identify an appropriate spatial and temporal boundary for each resource. The spatial boundary for each resource is noted in the cumulative impact discussion for each resource.
3. Identify other actions, both NPS and non-NPS, which are unrelated to the proposed action but which may also have impacts on the same resources as the proposed action.
4. Assess the cumulative impacts for each resource, which is the total impact of the proposed action on the resource plus the impacts of other actions that may also be affecting that resource.

The Park consists of two geographically distinct islands, Liberty Island and Ellis Island, so not all activities and projects will generate impacts that should be considered cumulatively with improvements to the monument and the Park. Activities on both islands will affect visitor use and experience (because many visitors tour both islands on the trip and projects on either island could affect their overall experience at the Park). However, improvements specific to Ellis Island are not anticipated to cumulatively affect Liberty Island's historic or cultural resources or public safety.

Table 4.1 summarizes the cumulative impacts projects and describes the various resource areas that could be affected by these future projects.

Table 4.1 - Cumulative Impacts Projects

Type of action	Cumulative Impacts Project	Description	Status
Ellis Island Improvements	Ellis Island Building Improvements	<p>On Ellis Island, the deteriorated Baggage and Dormitory Building and Powerhouse will be stabilized. The new Immigration Building will be fully rehabilitated for Park administrative purposes with a proposed Leadership in Energy & Environmental Design (LEED) rating of at least gold.</p> <p>Affected Resources: Proposed enhancements to buildings on Ellis Island will potentially have an impact on visitor experience and associated visual resources in the overall area of the Statue of Liberty National Monument.</p>	FUTURE
	Ellis Island Museum Expansion	<p>The museum exhibits at Ellis Island will undergo a major expansion with the reconfiguration of existing exhibits and the addition of new exhibits.</p> <p>Affected Resources: The expansion of the Ellis Island museum exhibits will have a large, positive impact on visitor use.</p>	FUTURE

VISITOR USE AND EXPERIENCE

METHODOLOGY AND ASSUMPTIONS

The purpose of this impact analysis is to assess the effects of the alternatives on the visitor use and experience at the Park, which includes both Liberty and Ellis Islands, and within the monument itself. To determine impacts, the current visitor experience at the Park was considered, and the potential effects of the construction and implementation of the life safety upgrades on visitor experience and use were analyzed.

STUDY AREA

The study area for visitor use and experience includes the entire project area, which includes all of Liberty Island, but is primarily focused on areas within the monument.

IMPACT THRESHOLDS

Negligible: There would be no noticeable or visible changes resulting from implementation of the alternative and few visitors would likely be aware of any effects. There would be no change in visitor satisfaction or behavior.

Adverse

Minor: There would be noticeable and/or visible changes resulting from implementation of the alternative, but these changes would not appreciably limit Park assets that affect most visitors' experience (such as access to Ellis Island, the monument, views to and from the monument). Visitor satisfaction would remain stable.

Moderate: There would be noticeable and/or visible changes resulting from implementation of the alternative, and these changes would appreciably limit some Park assets that would affect most visitors' experience. While the number of participants engaging in a specified activity would not be noticeably altered, visitor satisfaction would begin to decline.

Major: There would be noticeable and/or visible changes resulting from implementation of the alternative, and these changes would appreciably limit Park assets that would affect the majority of visitors' experience. The number of participants engaging in a specified activity would be noticeably altered and visitor satisfaction would decline.

Duration: Short-term impacts would occur throughout the course of a year, which is the estimated period of construction. Long-term impacts would last more than one year.

IMPACTS OF THE NO ACTION ALTERNATIVE

The no action alternative represents a continuation of the existing visitor use without any changes to the attractions, amenities, and features at Ellis Island or Liberty Island. In the monument, there would be no changes to the fire safety system, accessibility, circulation, ventilation, or lighting systems, and no other upgrades would occur.

FIRE SAFETY SYSTEM MODIFICATIONS

The existing fire safety system would remain unchanged and would continue to pose risks to public safety, but impacts to visitor use and experience would remain unchanged except during a fire emergency.

Since the fire safety system is largely hidden from view outside of public areas of the monument, the current fire safety system would continue to have no effect on visitor use and experience. Impacts to visitors during a fire emergency are analyzed in the public safety section of this chapter.

VERTICAL CIRCULATION MODIFICATIONS

At the monument, visitors would continue to experience the current sequence of circulation through the pedestal via narrow, steep stairs that are not code compliant. Visitors with disabilities who require the assistance of an elevator would not be able to access levels in the monument above Level 5P.

The current conditions are not ideal for many visitors, particularly in the summer months when the interior of the statue is exposed to high temperatures with poor air circulation. In addition, visitors with disabilities are unable to access the Level 6P observation deck or the crown observation platform, which allow panoramic views of Lower Manhattan, Brooklyn, and Jersey City. Both the crown observation platform and the views are Park assets that enhance visitor experience. Nevertheless, the NPS manages visitor expectation by notifying people who intend to purchase tickets to the monument that portions are not fully accessible and the climb in the pedestal and statue is strenuous and cramped. As a result of this notification and the relatively few guests who are affected, visitor satisfaction remains stable; under the no action alternative, there would be long-term minor adverse impacts to visitor use and experience.

OTHER IMPROVEMENTS

Under the no action alternative, the lighting fixtures would not be upgraded and would continue to provide relatively low levels of illumination throughout the pedestal, inhibiting full visual access to the historic fabric in the pedestal, such as the Eiffel beams. The existing lighting system would continue to have a long-term minor adverse effect on visitor use and experience since the current level of illumination in the monument, while low, is adequate for wayfinding and does not appreciably limit visual access to the historic fabric.

The restrooms on Level 1P would remain unchanged and would continue to meet visitor comfort needs inside the monument for most guests. Since the configuration of the restrooms is not fully accessible, a few visitors would be affected. However, due to the availability of accessible restrooms elsewhere on Liberty Island, there would be a negligible effect on visitor use or experience.

On Level 7P, the four air handling units would not be upgraded and the ventilation and climate control in the statue would continue to be inadequate. In the warmer months, visitors would continue to be subject to excessive heat in the statue, which would compromise visitor comfort. Continuing use of the current air handling units would have a long-term minor adverse effect on visitor use and experience since it creates some visitor discomfort, but does not prevent access to the statue.

CUMULATIVE IMPACTS

Because visitors often see both Liberty and Ellis Island in the same day, and consider both islands as part of the same experience, for the purposes of cumulative impact analysis, activities on both islands are considered. Several future activities at Ellis Island could affect visitor use and experience including infrastructure and facilities enhancements. In relation to this project, future cumulative projects would serve to enhance the overall visual quality and visitor amenities within the Park and enhance visitor comfort in the monument and increased life safety, thereby creating a beneficial long-term impact on visitor use and experience. Cumulative projects may yield short-term minor adverse impacts during construction if the construction occurs at the same time as other project construction, but with a long-term beneficial impact as described above. When combined with the long-term minor adverse impacts of the no action alternative, there would be long-term negligible adverse cumulative impacts.

IMPACTS OF THE ACTION ALTERNATIVE

The action alternative does not include any modifications to Ellis Island or any changes to the amenities or features on Liberty Island, except inside the monument. Within the monument, multiple improvements to the fire safety system, accessibility, vertical circulation, ventilation, and lighting system are proposed.

FIRE SAFETY SYSTEM MODIFICATIONS

The enhancements to the fire safety system would have no effect on visitor use or experience following construction since they would not be perceptible or visible to the public.

VERTICAL CIRCULATION MODIFICATIONS

The proposed actions would create a new pattern of circulation and accessibility in the pedestal, introducing wider stairs that are compliant with life safety and fire safety codes. Multiple opportunities to visually appreciate the historic Eiffel beams would be maintained. The egress from the monument would discharge visitors down through the pedestal and out the sally port, creating an opportunity for visitors to appreciate an important historical component of the monument that is currently closed to the public, and would result in a beneficial effect.

A new supplemental lift would be installed to connect Levels 5P and 6P and would enable emergency evacuation from the statue and full accessibility to Level 6P, resulting in long-term beneficial impacts for visitors with limited mobility who would have expanded opportunities to appreciate views from the exterior observation deck. Visitors in wheelchairs would still be unable to access the statue and the exterior of the Level 6P observation deck due to its narrow width.

The replacement of the main and emergency elevators would have a long-term beneficial impact for visitors since the new elevators would be more reliable than the existing ones, which are often out of service.

On the exterior of the monument, the existing wood stairs on the north of the terreplein would be removed, creating a beneficial impact on visual resources in the project area since the wood stairs are visually inconsistent with the aesthetic of Fort Wood and the monument. The new stairs added to the south side of the pedestal would create a noticeable change in the visual appearance and views of the monument, but the addition would be visually consistent with the stairs on the north side, so long-term adverse impacts would be minor. The new stairs added to the north side that would require a penetration through the terreplein would create a noticeable effect on views from above, but not in a manner that would appreciably limit or compromise views of the monument; therefore, long-term adverse effects would be minor.

On the exterior of the pedestal, the presence of new stairs would create a long-term adverse effect on visual resources. However, the design of the new south stairs is intended to complement the existing stairs on the north side. Further design refinement would be undertaken pursuant to the conditions of the Programmatic Agreement (PA) to ensure consistency with the aesthetic of the existing historic features, so long-term adverse impacts would be minor.

OTHER IMPROVEMENTS

New lighting fixtures would be installed in and around the new stairs that would provide better illumination for visitors to navigate through the pedestal and visually appreciate the historic fabric in the pedestal, including the Eiffel beams. As a result, the proposed lighting system would have a beneficial impact on visitor use and experience.

The restrooms on Level 1P would be refurbished to enhance visitor comfort and accessibility, creating a beneficial impact on visitor use and experience.

On Level 7P, the air handling units would be upgraded to improve air circulation and the climate control system in the statue which would enhance visitor comfort and create a beneficial impact on visitor use and experience.

CONSTRUCTION

During construction, Liberty Island would remain open for visitation, but the monument would be closed for up to 12 months. Since the monument would be closed, some Park assets would be unavailable. However, only approximately 22% of visitors to Liberty Island have tickets to enter the monument¹, so the majority of visitors would still have unobstructed access to other features in the Park, such as Ellis Island, Liberty Island concession areas, views of the front of the statue, and views towards the adjacent skylines. The NPS would notify the public of the temporary closure so people who intend to purchase tickets to the monument would be able to restructure their visit and the majority of visitors would not be affected.

In addition to the closure of the monument, there would be visible impacts resulting from the presence of construction equipment and materials and the temporary closure of portions of Liberty Island, including areas of the lawn surrounding the monument and sections of the promenade immediately adjacent to the auxiliary dock. Despite the closures of these areas, visitors would still be able to access the majority of the promenade and photo opportunities of the front of the statue would be preserved.

Since the majority of visitors would not be affected by the closure of the monument and other portions of Liberty Island, visitor satisfaction would remain stable resulting in short-term minor adverse impacts to visitor use and experience during construction.

CUMULATIVE IMPACTS

Impacts from other actions and projects in the cumulative area of analysis would be the same as described for the no action alternative, ranging from long-term beneficial resulting from increased visitor opportunities and visual enhancements, to short-term minor adverse impacts resulting from construction. The effects of these actions, when added to the long-term beneficial impacts resulting from overall improvements to the monument and the short-term moderate adverse effects related to construction would result in long-term overall beneficial impacts on visitor use and experience in the project area, with possible short-term minor adverse impacts during construction if construction of projects occurs simultaneously.

CONCLUSIONS FOR VISITOR USE AND EXPERIENCE

NO ACTION ALTERNATIVE

Continuation of the current conditions under the no action alternative would affect visitor use and experience, but not to a degree that appreciably compromises the majority of visitors' satisfaction. Due to extensive notification of the strenuous climb, cramped conditions, and lack of full accessibility within the monument, visitor expectation is managed and satisfaction is stable. Impacts associated with other projects in the cumulative area of analysis would be long-term and beneficial, with short-term minor

¹ As many as 3,000 visitors a day can be granted access to the pedestal. Only 240 visitors may have access to the statue's crown on any given day (NPS 2010).

cumulative impacts during construction if construction occurs simultaneously. When combined with the long-term minor adverse impacts of the no action alternative, overall cumulative impacts to visitor use and experience would be long-term, negligible, and adverse.

ACTION ALTERNATIVE

The enhancements to the fire safety system would have no effect on visitor use or experience following construction since they would not be perceptible or visible to the public. The enhanced climate control, lighting system, and refurbished restrooms would improve visitor comfort and accessibility, creating a long-term beneficial impact on visitor use and experience.

The proposed improvements to the vertical circulation would provide visitors with a new opportunity to appreciate historic components of the monument that are currently unavailable to them, expanding accessibility and increasing the reliability of the elevators, thus creating beneficial impacts on visitor use. On the exterior of the pedestal, the design of the new stairs would be refined pursuant to the conditions of the draft PA to ensure visual consistency with the aesthetic of the existing historic features so long-term adverse impacts would be minor.

There would be short-term minor adverse impacts during construction resulting from the closure of the monument and portions of Liberty Island for up to 12 months.

Overall, cumulative impacts on visitor use and experience would be long-term and beneficial, with possible short-term minor adverse impacts during construction if construction of projects occurs simultaneously.

PUBLIC SAFETY

METHODOLOGY AND ASSUMPTIONS

The analysis of public safety considers risks to NPS staff and the general public that are associated with hazards in the project area as well as the proposed construction and maintenance of the proposed improvements. Impacts for this resource area were analyzed qualitatively using information provided by the project architects and engineers and Park service staff familiar with the current operation and maintenance within the project area.

STUDY AREA

The study area for the public safety impact analysis is primarily limited to inside the monument. The study area for cumulative impacts for public safety will be the overall project area of Liberty Island.

IMPACT THRESHOLDS

The impact intensities for the assessment of impacts on health and safety follow. Where impacts on health and safety become moderate, it is assumed that current visitor satisfaction and safety levels would begin to decline, and some of the Park's long-term visitor goals would not be achieved.

Negligible: The impact on public safety would not be measurable or perceptible.

Adverse:

Minor: The impact on public safety would be measurable or perceptible, but it would be limited to a relatively small number of visitors or employees within portions of the monument.

Moderate: The impact on public safety would be sufficient to cause a change in accident rates within portions of the monument that currently do not exhibit noticeable accident trends. During fire or life safety emergencies, no loss of life to visitors and staff would be likely to occur.

Major: The impact on public safety would be substantial. Accident rates in areas usually limited to low accident potential are expected to substantially increase in the short and long-term. During fire or life safety emergencies, visitors and staff would not have a safe means of egress and loss of life would be likely.

Duration: Short-term impacts would occur throughout the course of a year, which is the estimated period of construction. Long-term impacts would last more than one year.

IMPACTS OF THE NO ACTION ALTERNATIVE

The no action alternative represents a continuation of the existing operations and maintenance within the monument. Under the no action alternative, deficiencies in life safety code and accessibility within the monument would persist and public safety could be compromised during emergencies.

FIRE SAFETY SYSTEM MODIFICATIONS

Under the no action alternative, the existing fire safety system and emergency egress standard operating procedure would remain unchanged. In the unlikely event of a fire emergency in the monument, there would be life safety risks to staff and visitors due to the lack of fire and smoke barriers, smoke exhaust

system, and enclosed and pressurized emergency egress stairs which would result in long-term moderate adverse impacts to public safety.

VERTICAL CIRCULATION MODIFICATIONS

At the monument, visitors would continue to experience the current sequence of circulation through the pedestal via narrow, steep stairs that are not code compliant. Visitors in wheelchairs would not be able to access levels in the monument above Level 5P. As a result of NPS notification of the extremity of conditions when ascending the monument and the limited accessibility within certain portions of the monument, the resultant impacts to public safety and accessibility would continue to be perceptible, but limited to a relatively small number of visitors within portions of the monument and would be long-term adverse and minor.

OTHER IMPROVEMENTS

Under the no action alternative, the lighting fixtures would not be upgraded and would continue to provide relatively low levels of illumination throughout the pedestal. However, as evidenced by the low rate of accidents in the monument due to tripping, the continuance of the current lighting system would have a perceptible but slight impact on public safety, limited to a relatively small number of visitors or staff within portions of the monument resulting in long-term minor adverse impacts.

The restrooms on Level 1P would be remain unchanged and would not be fully accessible. The restrooms would continue to adequately serve the majority of visitors inside the monument, except visitors in wheelchairs. However, due to the availability of accessible restrooms elsewhere on Liberty Island, there would be a negligible effect on public safety.

On Level 7P, the four air handling units would not be upgraded and the ventilation and climate control in the statue would continue to be inadequate. In the warmer months, visitors would continue to be subject to excessive heat in the statue which contributes to exhaustion and fatigue. However, based on the low number of incidents attributed to fatigue and exhaustion, continued reliance on the existing air handling units would have a perceptible but slight impact on public safety, limited to a relatively small number of visitors or staff within portions of the statue, yielding long-term minor adverse impacts.

CUMULATIVE IMPACTS

Many future activities at Liberty Island could affect public safety, particularly during construction, when there would be short-term adverse impacts. However, the degree of cumulative effect would vary depending on the intensity and location of the construction activity and if the construction of more than one project was proceeding at the same time. Risks to public safety would be minimized since the construction contractor would follow an NPS-approved health and safety plan. Cumulative impacts projects would cause short-term minor adverse impacts during construction if they occur at the same time as the proposed project, but would result in a long-term beneficial impact on public safety at the Park.. When combined with the long-term adverse impacts of the no action alternative that range from mostly minor to moderate, there would be long-term adverse minor cumulative impacts to public safety.

IMPACTS OF THE ACTION ALTERNATIVE

The proposed actions in the action alternative would have no impacts to public safety on Ellis Island or on other parts of Liberty Island besides the monument. Within the monument, the action alternative would have impacts to public safety resulting from the implementation of modifications to the vertical circulation, fire system, lighting, ventilation, and climate control system.

FIRE SAFETY SYSTEM MODIFICATIONS

The installation of fire and smoke barriers and a smoke exhaust system as well as enhancements to the ventilation, pressurization, and sprinkler systems (water system upgrade) would have a long-term beneficial impact, improving emergency egress in the monument and reducing risks to visitors and staff during fire emergencies.

VERTICAL CIRCULATION MODIFICATIONS

The proposed actions would create a new pattern of circulation and accessibility in the pedestal, introducing wider stairs that are compliant with life safety and fire safety codes. The egress through the pedestal would utilize new enclosed and pressurized emergency egress stairs that would create a safe and compliant path of emergency egress for visitors and staff, creating a long-term beneficial impact.

A new elevator would be installed to connect Levels 5P and 6P and would enable universal accessibility to Level 6P. The main elevator that connects Levels 1P and 5P and the emergency elevator that connects Levels 6P to 7S would be replaced to ensure greater reliability in emergency response in the monument. These proposed actions would result in long-term beneficial impacts to public safety resulting in increased accessibility within portions of the monument and increased efficiency in emergency response.

The addition of new features on the exterior of the pedestal and terreplein would create a long-term beneficial impact on public safety since they would enable a compliant egress sequence from the monument.

OTHER IMPROVEMENTS

New lighting fixtures that provide better illumination for visitors to navigate through the pedestal would have a long-term beneficial impact on public safety since it would potentially reduce risks associated with trips and falls.

The restrooms on Level 1P would be refurbished with new fixtures and finishes and reconfigured for full accessibility, resulting in a long-term beneficial impact on public safety.

On Level 7P, the four air handling units would be replaced to enhance the ventilation and climate control in the monument, creating a long-term beneficial impact on public safety by maintaining a more constant internal air temperature within the statue.

CONSTRUCTION

During construction, Liberty Island would remain open for visitation, but the monument would be closed for up to 12 months. By closing the monument during construction, risks to public safety would be reduced. Since the construction zone would be limited to inside the monument, risks to visitors on the remainder of Liberty Island would be minimized so there would be short-term negligible adverse impacts to public safety.

CUMULATIVE IMPACTS

Impacts from other actions and projects in the cumulative area of analysis would be the same as described for the no action alternative, with long-term beneficial impacts related to previously completed improvements within the monument, and short-term minor adverse impacts related to construction activities that could occur simultaneously with the proposed project. The effects of these actions, when added to the long-term beneficial impacts resulting from overall improvements to the monument and the short-term negligible adverse effects related to construction would result in long-term overall beneficial impacts in the project area.

CONCLUSIONS FOR PUBLIC SAFETY

NO ACTION ALTERNATIVE

Under the no action alternative, there would be long-term minor adverse impacts on public safety due to the possibilities of accidents or injuries resulting from inefficient lighting and climate control systems. There would be long-term moderate adverse impacts to public safety resulting from the continued reliance on the existing fire safety system. Cumulative projects that would be completed at the same time as the proposed project could result in short-term minor adverse impacts during construction, but would create a long-term beneficial impact on public safety at the Park. When combined with the long-term adverse impacts of the no action alternative that range from mostly minor to moderate, there would be a long-term adverse minor cumulative impact to public safety.

ACTION ALTERNATIVE

The improvements to the fire safety system and the vertical circulation modifications would create long-term beneficial impacts to public safety by introducing new code-compliant features that would enhance visitor comfort, emergency response, and safe egress from the monument, reducing risks to visitors and staff.

New lighting fixtures and an enhanced climate control system and ventilation would increase visitor comfort and safety, reducing the risks associated with trips, falls, and fatigue in the monument. Refurbishments to the restrooms on Level 1P would enhance visitor comfort and provide full accessibility, resulting in a long-term beneficial impact on public safety.

During construction, risks to public safety would be reduced since the monument would be closed; therefore, short-term adverse impacts to public safety would be negligible.

Cumulative impacts from other projects could include short-term minor and adverse effects during construction, but with beneficial impacts to public safety in the long-term. When combined with the mostly long-term beneficial impacts resulting from implementation of the action alternative, there would be a long-term beneficial cumulative impact to public safety.

HISTORIC STRUCTURES

METHODOLOGY AND ASSUMPTIONS

The analysis of effects on cultural resources that are presented in this section responds to the requirements of both NEPA and Section 106 of the NHPA. In accordance with the ACHP's regulations implementing Section 106 (36 CFR Part 800, *Protection of Historic Properties*), impacts on cultural resources were identified and evaluated by (1) determining the Area of Potential Effects (APE); (2) identifying cultural resources present in the APE that are listed in or eligible to be listed in the National Register of Historic Places (NRHP) (i.e., historic properties); (3) applying the criteria of adverse effect to affected historic properties; and (4) considering ways to avoid, minimize, or mitigate adverse effects.

As effects of the project on historic properties cannot always be fully known, a draft PA has been prepared to enhance consultation with SHPO and ACHP, better outline the process and schedule for the project's consultation and any required mitigation. The draft PA is contained in Appendix C of this report.

AREA OF POTENTIAL EFFECTS

As indicated in "Chapter 3: Affected Environment," and the draft PA dated May 3, 2010, the Area of Potential Effects (APE) for this undertaking has been determined by the NPS in consultation with SHPO and "includes the entire Liberty Island, although construction activity will be limited to the immediate vicinity of the Statue and Fort Wood (NPS 2010). The Statue of Liberty National Monument at Liberty Island is a historic structure that consists of several resources, including the monument, buildings, structures, and sites; however, the majority of the proposed actions are confined to the monument (see the Purpose and Need section in chapter 1).

The Statue of Liberty Enlightening the World is the primary historic resource on Liberty Island. The statue, its pedestal, and Fort Wood and the base are the three identifiable resource components of the monument. Fort Wood, which serves as the setting for the base, dates from 1811 and has been determined significant in its own right.

Historic structures is the resource category under which many of the resources at Liberty Island are classified and documented in the NRHP inventory form. Impacts to historic structures is addressed in the following section.

IMPACT THRESHOLDS

For a structure to be listed on the NRHP, it must possess significance (the meaning or value ascribed to the historic property), and the features necessary to convey its significance must have integrity. For purposes of analyzing potential impacts on historic structures, the definitions for identifying intensity of an impact are defined as follows:

Negligible: The impact is at the lowest level of detection with neither adverse nor beneficial consequences. For purposes of Section 106, the determination of effect would be *no adverse effect*.

Adverse:

Minor: Alteration of a pattern(s) or feature(s) of a historic structure listed on or eligible for listing on the NRHP would not diminish the integrity of a character-defini

g feature(s) or the overall integrity of the historic property. For purposes of Section 106, the determination of effect would be no adverse effect.

Moderate: The impact would alter a character-defining feature(s) of a historic structure and diminish the integrity the structure(s), but does not jeopardize the National Register eligibility of the structure(s). For purposes of Section 106, the determination of effect would be adverse effect, but one which could be fairly easily avoided, minimized, or mitigated through an Agreement Document.

Major: The action would alter a character-defining feature(s) of the structure(s) and severely diminish the integrity of the historic property, thus compromising the eligibility of the structure(s). For purposes of Section 106, the determination of effect would be adverse effect, and would present serious difficulty to avoid, minimize, or mitigate through an Agreement Document.

Duration: Short-term impacts are those lasting less than one year; long-term impacts are those lasting longer than one year.

IMPACTS OF THE NO ACTION ALTERNATIVE

The no action alternative provides a continuation of current conditions with no change to safety features or pedestrian circulation within the monument. Under this alternative there would be no change to the structures associated with the monument and features at Liberty Island. This alternative poses no impact to historic fabric.

FIRE SAFETY SYSTEM MODIFICATIONS

Under the no action alternative, the existing fire suppression system would remain unchanged and would result in negligible impacts or no effect to historic features within the monument.

VERTICAL CIRCULATION MODIFICATIONS

Visitor circulation at the monument would remain unchanged under the no action alternative. The points of egress would remain unchanged and the temporary wood stairs that extend from the terreplein to the mall would remain in place. Under the no action alternative, elevator access would not extend above Level 5P. The no action alternative does not alter historic features and therefore has no impact on historic structures.

OTHER IMPROVEMENTS

Under the no action alternative, the lighting fixtures would not be upgraded and would continue to provide illumination at the current levels. The current lighting provides for adequate illumination throughout the monument; therefore, the no action alternative would have no impact on historic features associated with the monument and Liberty Island.

Under the no action alternative, the restrooms on Level 1P would remain unchanged. The current restrooms provide adequate facilities; therefore, the no action alternative would have no impact on historic features.

The air handling units located on Level 7P would not be upgraded and the ventilation and climate control in the monument would continue to be inadequate. Temperature and moisture fluctuation would continue in response to climatic changes and the number of people visiting the statue. Changes in temperature and moisture within the statue have the potential to contribute to corrosion and deterioration of sensitive

surfaces over time. As a result, the no action alternative would result in a minor adverse long-term impact on historic features.

The third water holding tank would not be installed under the no action alternative. The present system is adequate to meet the needs at Liberty Island and would pose no impact.

CUMULATIVE IMPACTS

Future activities at Ellis Island would not impact contributing structures and features associated with the monument through infrastructure, and facilities enhancements. Therefore, under the no action alternative there would be no cumulative impacts to historic structures.

IMPACTS OF THE ACTION ALTERNATIVE

The action alternative does not include any changes to features on Liberty Island, except at the monument. Within the monument, multiple improvements to the fire safety system, vertical circulation, ventilation, and the lighting system are proposed.

FIRE SAFETY SYSTEM MODIFICATIONS

The installation of fire and smoke barriers, a smoke exhaust system, new air handling units, and pressurized stairs would enhance National Fire Protection Association (NFPA 13) code compliance to the extent practicable without alteration to historic fabric. The fire safety modifications would ideally not cause new impacts to historic fabric and thereby result in long-term negligible impacts to the monument or associated features.

VERTICAL CIRCULATION MODIFICATIONS

Under the proposed action, new and wider stairs would replace the existing stairs within the pedestal. Stair A would extend from Levels 1P to 6P and would be enclosed in a standard stair tower from Levels 1P to 3.1P. An enclosed “tube” that follows each flight of steps would extend from Levels 3P to 4P. Stair B would serve Levels 3P to 6P. At Levels 4P to 6P, both stairs would be enclosed in standard walls. Between Levels 3P and 4P, the stair would be open within the space created between the concrete walls of the pedestal, the elevator shaft, and the stair enclosure.

The new enclosed stair would be constructed of pre-cast concrete with glass panels provided at landings and other strategic locations to enhance views of the Eiffel beams. The new stairs would be installed with connections to the structure at the same location as the present stairs. Due to the increased load (width and weight) of the new stairs, additional structural strength is required for each of the connections. The specific locations of each bolt, size of the bolts used, and the number of holes at the new connections would change to reflect the additional structural requirements. The Eiffel beams and other features within the statue would not be penetrated or altered other than at the connection points for the new stairs. In keeping with the *Secretary of the Interior’s Standards for the Treatment of Historic Properties*, design features and finishes of the stairs and stair enclosures would be both respectful of the existing historic features and easily distinguishable as a non-historic element. Further design refinement would be undertaken pursuant to the conditions of the draft PA to ensure consistency with the existing historic features.

The circulation modifications would remove existing, non-historic stairs and elevators and install replacements to improve life and safety standards at the monument. The implementation would limit and ideally not cause new impacts to historic fabric. The alignment of the new stairs has been designed with runs and landings that go around the Eiffel beams with connections to the beams at the same locations as

the current stairs. Replacement of the existing stairs with two code compliant stairs would result in negligible impacts.

The existing elevator would be removed and a new elevator would be installed in conjunction with the replacement of the internal stairs. A new emergency lift would provide service between Levels 5P and 6P. The placement of the lift would be at the outer corner; its placement has been designed in a manner that would not impact historic fabric. As such, replacement of the elevators would result in a negligible impact.

Each stair would be required to have a protected and enclosed discharge to the exterior. A second means of egress would be introduced to discharge visitors through the pedestal plaza at Level 3P down through the sally port. The egress would be provided by the introduction of a new set of exterior stairs at the south, adjacent to the pedestal wall, similar to the existing north stairs. The stairs would be constructed at the exterior of the monument in a manner that would not detract from the integrity of the pedestal wall. The stairs and access through the sally port would replace the existing temporary wood stairs from the terreplein to ground level. The second method of egress has been designed to be visually compatible with the pedestal and to avoid any penetration or alteration to the existing historic exterior walls of the pedestal or Fort Wood. The proposed stairs would be finished in a manner that is compatible with the existing stairs and pedestal following the *Secretary of the Interior's Standards for the Treatment of Historic Properties*, and would be faced with granite that is similar in color and texture to the pedestal and features. Further design refinement would be undertaken pursuant to the conditions of the PA to ensure consistency with the existing historic features.

Access to the base would be through the terreplein under the new stairs and into the base for access to the sally port. The stairs would penetrate the non-historic concrete fill supporting the terreplein. The brick and stone walls of the sally port would remain unchanged. The floor of the tunnel would remain intact with a new and separate floor set on top to provide code-compliant slope for pedestrian egress. The existing doors that secure the sally port are a non-contributing element and could be changed without impact to historic fabric. The addition of a second point of egress from Level 3P to the terreplein and through to the base has been designed to avoid impacts to the historic Fort Wood and the walls of the pedestal. As a result, the addition of a second egress would be a negligible long-term impact. The beneficial impact of this approach is the continued preservation of the walls of Fort Wood and the pedestal.

OTHER IMPROVEMENTS

The upgraded lighting system would ideally not cause new impacts to historic fabric, and therefore, result in no effect on the historic features or structures. Refurbishments to the restrooms on Level 1P would have no impact on historic features or structures.

The four air handling units on Level 7P would be replaced to enhance ventilation and climate control in the statue. Enhanced ventilation and climate control would result in a long-term beneficial effect by stabilizing interior temperatures and humidity potentially reducing moisture and related condensation, thereby improving preservation of the structure.

A new water holding tank would be installed in the area adjacent to the administrative buildings where two existing water tanks are currently located, and would therefore not physically or visibly impact the monument or associated historic structures. The installation of a third tank would enhance available water supply during a fire emergency and would therefore result in a long-term beneficial impact to the continued preservation and protection of the monument and other structures on Liberty Island.

CONSTRUCTION

Staging areas have been selected to pose minimum impacts to the monument and historic fabric during construction activities. Construction activities will be undertaken in accordance with the *Secretary of the Interior's Standards for the Treatment of Historic Properties* and would limit and ideally not cause new impacts to historic features and therefore, result in negligible short-term impacts to historic fabric or structures.

CUMULATIVE IMPACTS

Cumulative impacts from other projects at Ellis Island would be the same as described for the no action alternative; there would be no cumulative impact to historic structures or features associated with the monument.

CONCLUSIONS FOR HISTORIC STRUCTURES

NO ACTION ALTERNATIVE

Continuation of the current conditions under the no action alternative would have a negligible impact on the continued preservation of the monument and the historic features associated with the monument. Therefore, the no action alternative would have no direct or cumulative impacts to historic structures.

ACTION ALTERNATIVE

The action alternative would result in long-term beneficial impacts to historic structures and features. The improvements to the fire safety system and the vertical circulation modifications in the monument would result in long-term beneficial impacts to historic structures and features at Liberty Island. Most notably, the upgraded fire safety system would enhance the protection and preservation of the monument. Construction activities will be undertaken in accordance with the *Secretary of the Interior's Standards for the Treatment of Historic Properties* and would limit and ideally not cause new impacts to historic features and therefore, result in negligible short-term impacts to historic fabric or structures. Further design refinement would be undertaken pursuant to the conditions of the draft PA to ensure consistency with the existing historic features. There would be no cumulative impacts to historic structures.

SECTION 106 SUMMARY

The action alternative would be undertaken in accordance with the *Secretary of the Interior's Standards for the Treatment of Historic Properties* and would limit impacts to historic structures. As a result, the project should have "no adverse effect" on historic properties. Because the effects of the project are not fully known at this time, a draft PA has been prepared, that once signed, will enhance consultation with the SHPO and ACHP, and better outline the process and schedule for the project's consultation and any required mitigation.

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CHAPTER 5: CONSULTATION AND COORDINATION

The National Park Service (NPS) places a high priority on public involvement in the National Environmental Policy Act (NEPA) process and on giving the public an opportunity to comment on proposed actions. As part of the NPS NEPA process, issues associated with the proposed action were identified during the internal scoping meeting held with NPS and have been communicated to other affected agencies and stakeholders.

PUBLIC SCOPING

In addition to internal and agency scoping, public scoping for this Environmental Assessment and Assessment of Effect (EA/AoE) began on March 12, 2009 and concluded on April 12, 2009. Notice of the public comment period was posted on the NPS Planning, Environment, and Public Comment website (PEPC). During the 30-day comment period, no public comments were received.

AGENCY CONSULTATION

Coordination with local and federal agencies and various interest groups was conducted during the NEPA process to identify issues and/or concerns related to the proposed actions.

SECTION 7 CONSULTATION

In accordance with Section 7 of the Endangered Species Act, consultation letters were sent from the NPS to the U.S. Fish and Wildlife Service (USFWS), the New Jersey Fish and Wildlife Service (NJ FWS), the New York State Department of Environmental Conservation (NYSDEC), and the National Oceanic and Atmospheric Administration, National Marine Fisheries Service (NOAA NMFS).

United States Fish and Wildlife Service

A consultation letter was sent to the USFWS on March 11, 2010 (see Appendix A). The USFWS responded during the public comment period and instructed the NPS to verify which federally listed species may occur in the project area. After reviewing a database of federally listed species within the project area's municipality of Jersey City, New Jersey, the NPS verified that the proposed project has a no effect determination for federally listed species because there are no extant, historic, or potentially occurring federally listed species within the project area.

New York State Department of Environmental Conservation

An initial consultation letter was sent to the NYSDEC on March 11, 2010 (see Appendix A). The agency responded on March 29, 2010 stated that there were "no records of known occurrences of rare or state-listed animals or plants, significant natural communities, or other significant habitats, on or in the immediate vicinity of your site" (see Appendix A).

New Jersey Fish and Wildlife Service

An initial consultation letter was sent to the NJ FWS on March 11, 2010 (see Appendix A). The agency responded on March 24, 2010 stated that to obtain more information regarding endangered/threatened species, the NPS will need to complete and submit a Natural Heritage Data Request Form (see Appendix A).

National Oceanic and Atmospheric Administration, National Marine Fisheries Service (NOAA NMFS)

A consultation letter was sent to the NOAA NMFS on March 11, 2010 (see Appendix A). The agency responded on March 26, 2010 stating that “none of the proposed actions will affect New York Harbor or any waters of the United States” (see Appendix A). In addition, this letter explained that although a population of federally endangered shortnose sturgeon (*Acipenser brevirostrum*) occurs in the Hudson River, the proposed actions will occur in the upland areas where no federally endangered species occur.

SECTION 106 CONSULTATION

Section 106 of the National Historic Preservation Act (NHPA) requires federal agencies to take into account the effects of their undertakings on historic properties. In accordance with the regulations implementing Section 106, letters initiating the process were sent to the Advisory Council on Historic Preservation (ACHP), the New York State Historic Preservation Officer (SHPO), Tribal Historic Preservation Office (THPO), Delaware Nation, and Delaware Tribe in February 2010.

In addition, to facilitate the Section 106 process, the NPS has developed a draft Programmatic Agreement (PA) for the project in consultation with the ACHP and the SHPO. The agreement serves to enhance ongoing consultation with SHPO and ACHP, more clearly outline the process and schedule for project consultation, and address any required mitigation. The draft PA Regarding Life and Safety Upgrades to the Statue of Liberty is located in Appendix C of this document and is available for public review and comment. The record of all correspondence described below is included in Appendix A.

Advisory Council on Historic Preservation

A consultation letter was sent to the ACHP on March 11, 2010 and a response was received on March 31, 2010 requesting more information on the project. The NPS furnished additional project information via email on April 8, 2010.

Delaware Tribe

An initial consultation letter was sent to the THPO for the Delaware Tribe on March 11, 2010 and a second consultation letter was sent on May 27, 2010 including information about the draft PA. The Delaware Tribe responded on June 17, 2010 with no objections or suggestions for the project.

Delaware Nation

An initial consultation letter was sent to the THPO for the Delaware Nation on March 11 and a second consultation letter was sent on May 27, 2010 including information about the draft PA. A response was received from the Delaware Nation on April 5th, 2010, stating that they will be a consulting party for this project and would like to be informed regarding changes to the project.

Stockbridge- Munsee Community

An initial consultation letter was sent to the THPO for the Stockbridge- Munsee Community on March 11, 2010 and a second consultation letter was sent on May 27, 2010 including information about the draft PA. The Stockbridge- Munsee Community responded on July 6, 2010 stating that the proposed actions do not appear to endanger archeological sites of interest to the Tribe.

New York State Historic Preservation Office

An initial consultation letter was sent to the SHPO on March 11, 2010. The SHPO responded on March 11, 2010 expressing concern over “the proposed Temporary Access options presented for use while the upgrades to the Fort Wood and Pedestal sections of the Statue are under construction”, explaining that “if any of the proposed options are chosen they would constitute an Adverse Effect to the historic resource.” A second consultation letter was sent on May 27, 2010 including information about the draft. The SHPO responded on July 9, 2010 notifying the NPS that the Shinnecock Indian Nation received federal recognition on June 13, 2010. The SHPO indicated that the Shinnecock Indian Nation has expressed an interest in Liberty Island, Ellis Island, and New York City. *Note: Since, June 13, 2010, the federal recognition has been rescinded.*

New Jersey State Historic Preservation Office (NJS SHPO)

An initial consultation letter was sent to the NJS SHPO on March 11, 2010, but no response was received from the NJS SHPO.

LIST OF AGENCIES AND ORGANIZATIONS WHO WILL BE NOTIFIED OF THE PUBLICATION OF THE EA/AOE

Notice of this EA/AoE will be posted on PEPC. In addition, the NPS will notify the following organizations and agencies of its availability.

- Advisory Council on Historic Preservation
- Delaware Tribe
- Delaware Nation
- New Jersey Fish and Wildlife Service
- New Jersey State Historic Preservation Office
- New York State Department of Environmental Conservation
- New York State Department of State, Division of Coastal Resources
- New York State Historic Preservation Office
- National Oceanic and Atmospheric Administration, National Marine Fisheries Service
- Shinnecock Indian Nation
- Stockbridge- Munsee Community
- U.S. Fish and Wildlife Service

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ACRONYMS

Advisory Council on Historic Preservation	ACHP
Americans with Disabilities Act	ADA
American Institute of Architects	AIA
American Museum of Immigration	AMI
American Society of Landscape Architects	ASLA
Architectural Barriers Act	ABA
Architectural Barriers Act Accessibility Standard	ABAAS
Area of Potential Effect	APE
Assessment of Effect	AoE
Choosing- By-Advantages	CBA
Clean Water Act	CWA
Council on Environmental Quality	CEQ
Code of Federal Regulations	CFR
Cultural Landscape Inventory	CLI
Cultural Landscape Report	CLR
Director's Order	DO-12
Environmental Assessment	EA
Environmental Impact Statement	EIS
Environmental Protection Agency	EPA
Geographic Information Systems	GIS
Government Performance and Results Act	GRPA
Machine-Room-Less	MRL
National Environmental Policy Act	NEPA
National Fire Protection Association	NFPA
National Historic Landmark	NHL
National Historic Preservation Act	NHPA
National Oceanic and Atmospheric Administration,	NOAA
National Marine Fisheries Service	NMFS
National Park Service	NPS
National Parks Omnibus Management Act	NPOMA
National Register of Historic Places	NRHP
New York State Dept of Environmental Conservation	NYSDEC
New York State Office Parks, Recreation, and Historic Preservation	NYSOPRHP
Occupational Safety and Health Administration	OSHA
Planning, Environment, and Public Comment website	PEPC
Programmatic Agreement	PA
Project Management Information System	PMIS
State Historic Preservation Officer	SHPO
Statement of Findings	SOF
Traditional Cultural Property	TCP
United Nations Educational, Scientific and Cultural Organization	UNESCO
United States Fish and Wildlife Service	USFWS
United States Park Police	USPP
Value Analysis	VA

KEY WORD GLOSSARY

Affected Environment — The existing environment to be affected by a proposed action and alternatives.

Contributing Resource — A building, site, structure, or object that adds to the historic significance of a property or district.

Council on Environmental Quality — Established by Congress within the Executive Office of the President with passage of the National Environmental Policy Act of 1969. CEQ coordinates federal environmental efforts and works closely with agencies and other White House offices in the development of environmental policies and initiatives.

Cultural Resources — Prehistoric and historic districts, sites, buildings, objects, or any other physical evidence of human activity considered important to a culture, subculture, or community for scientific, traditional, religious, or other reason.

Cumulative Impacts — Under NEPA regulations, the incremental environmental impact or effect of an action together with the effects of past, present, and reasonably foreseeable future actions, regardless of what agency or person undertakes such other actions (40 CFR Part 1508.7).

Enabling Legislation — Legislation that gives appropriate officials the authority to implement or enforce the law.

Endangered Species — Any species in danger of extinction throughout all or a significant portion of its range. The lead federal agency for the listing of a species as endangered is the U.S. Fish and Wildlife Service, and it is responsible for reviewing the status of the species on a five-year basis.

Endangered Species Act (16 U.S.C. 1531 et seq.) — An act which provides a means whereby the ecosystems upon which endangered species and threatened species depend may be conserved and which provides a program for the conservation of such endangered species and threatened species.

Environmental Assessment — An environmental analysis prepared pursuant to the National Environmental Policy Act to determine whether a federal action would significantly affect the environment and thus require a more detailed environmental impact statement (EIS).

Executive Order — Official proclamation issued by the president of the United States that may set forth policy or direction or establish specific duties in connection with the execution of federal laws and programs.

Impairment — Within this document, the term impairment has two separate definitions. The NPS requires an analysis of potential effects to determine whether actions would impact or impair Park resources. NPS is empowered with the management discretion to allow impacts on Park resources and values (when necessary and appropriate) to fulfill the purposes of a Park, as long as the impact does not constitute impairment of the affected resources and values. Impairment is also a classification of poor water quality for a surface water body under the U.S. Clean Water Act.

Lintel — In classical western architecture, a lintel is a horizontal, load-bearing block that spans the space between two supports

Monument — In this EA/AoE, the term monument includes the base of Fort Wood, pedestal, and statue.

National Environmental Policy Act (NEPA) — The act as amended, articulates the federal law that mandates protecting the quality of the human environment. It requires federal agencies to systematically assess the environmental impacts of their proposed activities, programs, and projects including the “no build” alternative of not pursuing the proposed action. NEPA requires agencies to consider alternative ways of accomplishing their missions in ways which are less damaging to the environment.

National Historic Preservation Act of 1966 (16 U.S.C. 470 et seq.) — An act to establish a program for the preservation of historic properties throughout the nation, and for other purposes, approved October 15, 1966 (Public Law 89-665; 80 STAT. 915; 16 U.S.C. 470 as amended by Public Law 91-243, Public Law 93-54, Public Law 94-422, Public Law 94-458, Public Law 96-199, Public Law 96-244, Public Law 96-515, Public Law 98-483, Public Law 99-514, Public Law 100-127, and Public Law 102-575).

National Register of Historic Places (NRHP) — A register of districts, sites, buildings, structures, and objects important in American history, architecture, archeology, and culture, maintained by the secretary of the interior under authority of Section 2(b) of the Historic Sites Act of 1935 and Section 101(a)(1) of the National Historic Preservation Act of 1966, as amended.

Observation Deck — The observation deck is the top level of the pedestal (Level 6P) and provides a 180-degree vista of lower Manhattan, Brooklyn, and Staten Island in New York City and Jersey City in New Jersey.

Pedestal — The pedestal was designed by Richard Morris Hunt in 1877 as a granite-clad, concrete structure to support the statue. It is situated within the foundation of Fort Wood and is approximately 150 feet in height above its foundation. There are seven pedestal levels at the statue.

Quoins — Structural or decorative cornerstones of either brick or stone walls.

Scoping — Scoping, as part of NEPA, requires examining a proposed action and its possible effects; establishing the depth of environmental analysis needed; and determining analysis procedures, data needed, and task assignments. The public is encouraged to participate and submit comments on proposed projects during the scoping period.

Statue of Liberty — The Statue of Liberty Enlightening the World, or the statue, was a gift from France to the United States to commemorate the American centennial and the friendship between the two countries that was established during the American Revolution. The statue is an iconic universal symbol of freedom and democracy and has historically represented hope and opportunity to the millions of immigrants who passed by her on their entry into the United States.

Statue of Liberty National Monument — An NPS-administered unit that includes Ellis Island and Liberty Island, including the Statue of Liberty Enlightening the World and Fort Wood.

Terreplein — The terreplein is the platform on which heavy guns were mounted during Fort Wood’s tenure as a fortified military post for New York Harbor in the 19th century.

Threatened Species — Any species that is likely to become an endangered species within the foreseeable future throughout all or a significant portion of its range.

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